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GEOGRAPHIC INTELLIGENCE REPORT

THE EUROPEAN BORDERS OF THE USSR



CIA/RR-G-12 May 1955

CENTRAL INTELLIGENCE AGENCY

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THE EUROPEAN BORDERS OF THE USSR

Introduction

The boundaries of the Soviet Union are of particular interest to the intelligence community because of the manner in which they are sealed to ordinary international intercourse. It is necessary to go back in history to the mid-nineteenth century and the boundary between Korea and China to find a comparable attempt to seal off a country from bordering peoples with similar cultures.

In March 1946, Winston Churchill, speaking at Fulton, Missouri, observed that from "Stettin in the Baltic to Trieste in the Adriatic, an <u>iron curtain</u> has descended across the Continent. Behind that line lie all the capitals of the ancient states of central and eastern Europe..." Actually, the Soviet regime was suspicious of the outside world from its inception, near the end of World War I, and had erected an "iron curtain" along its own western frontiers in the interwar period. The establishment of tight border security west of the Soviet satellites after World War II was therefore merely an extension and elaboration of the already adopted Soviet policy of impermeable frontiers. The present boundary of the USSR is in reality an iron curtain within the Iron Curtain.

Three months after Churchill's Fulton address, John Foster Dulles propounded a theory that extended beyond Churchill's premise and encompassed the Far East. His thesis was that, for the purpose of achieving Soviet policy, the USSR had divided the world into three zones: (1) an Inner Zone, the USSR itself; (2) a Middle Zone, representing a belt or cordon sanitaire surrounding the Inner Zone; and (3) an Outer Zone, representing the rest of the world. The Soviet Inner Zone comprises the Soviet Union as originally established in 1917, together with adjacent territories subsequently incorporated. The Middle Zone, which cannot be regarded as fixed, consists of countries that have come under Soviet influence, with an increasing measure of control from Moscow. The central European part of the Middle Zone includes East Germany, Poland, Czechoslovakia, eastern Austria, Hungary, Rumania, Bulgaria, Albania, and (until 1948) Yugoslavia. In Asia the zone includes Outer Mongolia, Manchuria, North Korea, the Sinkiang Province of China, and probably the rest of Communist China; it is difficult, however, to predict the role that the Communist regime of Mao Tse-tung will ultimately play within the Soviet sphere. The third or Outer Zone comprises the balance of the world.

The efforts of the Soviet Government to establish a security zone along the entire border of the USSR extend to nations along the southern frontier. In both Turkey and Iran, however, fierce resistance to Soviet pressures has been encountered, and the usual pattern of Soviet penetration and domination has been successfully thwarted. As a result, areas of the Near and Middle East have not disappeared behind the Iron Curtain but have remained one of the major arenas of the struggle between East and West.

The Soviet technique of creating and maintaining an "iron curtain" serves two purposes, one domestic and the other foreign. From the domestic standpoint, nonintercourse is intended to insure that "pure" political thinking in the USSR will not become tainted, and at the same time it helps to prevent the internal discontent that might arise if the people of the Soviet Union were able to compare their standard of living with that prevailing in other countries. The Soviet people are told that a broad security belt, or buffer zone, is a necessary defense measure against an unfriendly world. From the external standpoint, Soviet propaganda is the more effective because actual conditions within the USSR are a matter of conjecture.

The great length of the Soviet frontier, the irregularities of terrain, and the heterogeneous population are a few of the complex factors with which the Soviet Government is faced in the effort to guard its borders. The northern and central European frontier areas are largely plains across which passage between the east and the West is comparatively easy. This accounts in part for the strict security measures employed by the Soviets and the fact that the European area is heavily guarded. The longest zone of Soviet influence lies in central and eastern Asia, reaching from the Pamir Mountains to Vladivostok, a distance of about 4,000 miles. That portion of the boundary with its vast stretches of mountains and deserts is not as stringently controlled as the Western European borders. This indicates that the Soviet manpower is not distributed indiscriminately but according to the type of terrain, the border peoples, the political significance of the border area, and the existence of known trouble spots. It is also quite probable that the employment of variations in the methods of guarding the frontier is a deliberate practice on the part of Soviet authorities intended to deter penetration or escape.

The present report deals specifically with the European boundaries of the USSR, those with Norway, Finland, Poland, Czechoslovakia, Hungary and Rumania. Only two of these countries are part of the free world, the others being Soviet satellites.

The attitude of the free governments in regard to the border differs greatly from that of the Communist countries. Although in a precarious geopolitical position, Finland, a non-satellite neighbor of the USSR, would consider it a restriction of individual liberty to prevent Finnish civilians from living in close proximity to the border. The Soviet Union, on the contrary, is meticulous in securing the inviolability of its own side of the boundary, and the Iron Curtain countries conform to the same pattern, employing rigid restrictive measures within their border areas. In order to further safeguard the impenetrability of the frontier, Soviet border guards are carefully picked and highly disciplined. Recruits are also trained in the art of observation and collection of intelligence in the frontier area. It is obvious that Soviet authorities do not consider the existence of Communist regimes as a sufficient security guarantee.

Portions of the Soviet European boundaries were nominally drawn on ethnic principles. A considerable degree of ethnic homogeneity has been achieved in the satellites by postwar boundary changes and shifts in population. The Soviet Union and the satellite regimes have not used the principle of ethnic homogeneity within international boundaries as a means of reducing international or internal friction, but simply as a convenient tool to be applied or ignored, depending on which course best suited the purposes of the governments. Thus, partial ethnic uniformity was forced upon the new Poland by moving Poles westward from former eastern Poland when that region was taken over by Belorussia and the Ukraine, and by the expulsion of many Germans from the areas east of the Oder-Neisse Line. Germans were also expelled from their former homes in northern East Prussia when the area was taken by the RSFSR, but there does not seem to have been a corresponding attempt to secure a solidly Russian population there, for it is reported that peoples from Soviet Central Asia have been moved into the areas on the Soviet side of the new boundary.

There is a sharp contrast between Soviet policy regarding peoples and Soviet policy regarding commerce along the boundaries. The western boundaries are sealed to the movement of people, but economic policy requires a maximum movement of goods among the satellites and the USSR.

Measures employed by the Soviet Bloc countries to seal their frontiers consist of a combination of physical barriers, border guards and patrols, border-zone restrictions, and constant surveillance of internal movements of the population. The existence of this wide-spread system of border controls is in itself a psychological deterrent to escape. Soviet citizens attempting to defect along the central European borders are faced with the additional problem of crossing satellite territory in order to find refuge in the West. Continued Soviet sensitivity and extreme security consciousness indicate that restrictive measures, rather than being relaxed, will be more rigidly enforced in the future.

In this study each boundary segment is discussed under four main headings: history; linear descriptions; boundary marking, administration, and security; and available maps.

The section on history gives in each case the background of the present boundary without attempting to present a full discussion of disputes and territorial transfers. The documents forming the legal basis of the present boundary are cited. Under linear description, each boundary sector, together with its immediate vicinity, is described topographically

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the descriptions of the boundaries of the Soviet Bloc countries are not as complete as those of the frontiers with Norway and Finland. The surveys and demarcation of each boundary, types of boundary markers used, provisions for regulating intercourse across the line, barbed-wire entanglements, watchtowers and other security structures, and personnel engaged in boundary administration and security are discussed. Examples of security structures and measures typical of the boundary area in general are presented. It is not possible, however, to give a complete and detailed picture of boundary security measures and personnel, because these factors are subject to almost constant change,

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The maps that accompany the report are mostly at small scales and rather generalized, but citations of more detailed maps are given.

I. Norway-USSR Border

A. History of the Boundary

The boundary between Norway and the USSR has retained its present alignment with only minor changes since 1826 (see accompanying map 11738). 1/* In that year, in an effort to prevent difficulties in the Foelleds Districter (districts held in common by Sweden, Norway, and Russia), the King of Sweden and Norway and the Emperor of All the Russias agreed to a demarcation of the line of sovereignty in the boundary area. The agreement was included in the "Convention of Limits Between Russia and Sweden," 2-14 May 1826, signed at St. Petersburg. 2/ This division of the area by Norway and Russia precluded Finnish access to the Arctic Ocean. The problem thus introduced was to exert great influence and to cause several changes in Norway's neighbors along the boundary.

The line established in 1826 was the boundary between Norway and Russia until 1920 and between Norway and Finland from 1920 to 1944. This boundary was described generally as following the Pasvikelv Pats-Yoki7** and Jakobselv Vor'yema7 Rivers, with several long, straight, connecting land sectors. The actual 1826 marking of the line consisted of only 10 markers or stone cairns, most of them set at the main breakpoints. Krokfjell (Muotkavaara) Mountain was established in 1833 as the meeting point of the territories of the USSR, Norway, and Finland by representatives of Russia proper and the Grand Duchy of Finland, but the marker was not erected there until after the 1846 Norwegian-Russian survey of the boundary.

After Finland became a neighbor of Norway in 1920, the two countries opened talks concerning the boundary in the Finnmark-Petsamo /Pechenga/ area. An agreement was reached on 28 April 1924 that superseded the 1826 agreement concerning the boundary between Finnmark

^{*}References in Arabic numerals are to the list of sources in Appendix B.

^{**}Place-name forms in this section are those that appear on the official 1947 Norwegian-USSR demarcation map and in the boundary survey protocol; the Russian form, when known, follows in brackets, and alternate names are given in parentheses. In most of the languages used in this report, the endings of geographic names carry the generic meaning; for example, in Norwegian "elv" means river and "fjell" means mountain. The English term is added in many cases, either in parentheses or capitalized, for easier understanding.

Province (fylke) of Norway and Petsamo District (herred) of Finland. 3/ Although it made no basic changes in the boundary description, the 1924 agreement contained a clause calling for the establishment of the line in the territorial sea north of the mouth of the Jakobselv. During the negotiations, however, the Norwegians proposed two modifications of the 1826 line, both to no avail. First, they wished to apply the thalweg principle to the Pasvikelv River near Ostrov Chevessuolo (island) and Ostrov Niva-saari; second, they proposed that the line leave the Pasvikelv in an easterly direction in the vicinity of Ozero Kuets-yarvi (lake) and continue to the Jakobselv, instead of following the river to a point north of Kolttakengyas (formerly the Boris Gleb area)* and then taking a southeasterly course to the Jakobselv. The second proposal had been rejected in the negotiations preceding the 1826 agreement, which not only established the boundary farther north but also provided for the cession by Norway to Russia of a small area around the Russian Church of Boris Gleb on the west bank of the Pasvikelv. In the 1922-24 Finnish-Norwegian negotiations, the Finns rejected the proposal for a change on the ground that Norway could offer no territorial compensation.

In 1925, Norway and Finland conducted a survey of the boundary. 4/So that there would be no doubt as to the course of the line in the Boris Gleb area, a boundary road was built and additional markers were erected. The Pasvikelv sector of the boundary was to follow the line in the river that had been established previously by the Norwegians and Russians. Special signs were placed on river islands to designate the country to which they belonged.

A supplementary protocol to clarify the position of the boundary in the mouth of the Jakobselv was signed on 12 September 1931 (see accompanying map 12104). This protocol established 11 points through which the line was to be drawn and also provided that vessels of both countries could freely lie and anchor on either side of the boundary. The line provided for in the protocol of 1931 was finally marked in 1939, using a series of 20 sight markers placed on the land in such a manner that the sight lines intersected at the 11 points along the boundary line.

^{*}The name "Kolttakengyas" is the present Russian version of "Kolttakengas," the name given to the town by the Lapps who settled the area. In the 16th century a Russian Orthodox church was built at the site of the present town of Kolttakengyas and dedicated to two 8th-century Russian princes, Boris and Gleb.

In August 1946, representatives of Norway and the Soviet Union met and established the Joint Soviet-Norwegian Commission for the Marking of the International Boundary Between the USSR and Norway. Its basic task was to establish the international boundary in accordance with the old Norwegian-Russian line. The discussions of the Joint Commission had the following results: (1) the line in the mouth of the Jakobselv was to follow the thalweg as determined at low tide, in accordance with the recommendation of the Norwegians; (2) the USSR was to give up demands for a change at Grensefoss (Graensefoss) Falls where Norway controls both banks of the Pasvikelv (marker No. 11); and (3) Norway would transfer the three small islands in the Pasvikelv to the USSR.

Only preliminary discussions were held on the problem of the territorial sea north of the mouth of the Jakobselv. Since the viewpoints and claims of the two countries to territorial waters differed radically, the Norwegians claiming 4 nautical miles and the Soviets 12, the Joint Commission decided to keep this question open for future diplomatic negotiations.

At the conclusion of the marking of the Soviet-Finnish boundary in 1945, it was agreed to place a three-nation boundary marker at Krokfjell. A Norwegian representative was present to approve the position of the marker, and a tri-state protocol was signed on 26 October 1945. After the Yaniskoski-Niskakoski area was ceded to the Soviet Union by Finland in 1947, a new demarcation of the northernmost sector of the Finnish-Soviet boundary, just south of Krokfjell, was undertaken. In the summer of 1947 a Norwegian representative inspected the marker, and on 3 December 1947 a new tristate protocol regarding the marker on Krokfjell, replacing the 1945 protocol, was signed.

During the summer of 1947, two mixed Norwegian-Soviet subcommissions (under the Joint Commission) marked the boundary. One
subcommission was supervised by the USSR, the other by Norway. The
Soviet-supervised subcommission marked the first section of the
boundary, from the junction at Krokfjell northward 61.1 miles to
69°32'N, north of Holmfossen. The Norwegian-supervised subcommission
marked the second section, from 69°32'N northward 60.5 miles to
marker No. 415, a buoy stake north of the mouth of the Jakobselv.
Each subcommission was responsible for placing, painting, and numbering the markers along its section of the boundary. A topographic
survey of a strip at least 0.5 kilometer (about 0.3 mile) wide
along each side of the boundary was made at the scale of 1:25,000,
and a polygon system was laid on which the rectangular coordinates
of the boundary markers were computed.

On 18 December 1947, with the final drafting and reviewing of the boundary documents, the boundary agreement, together with the maps and protocols,* was signed in Moscow. 5, 6, 7/ The Norwegian Storting ratified the agreement unanimously on 3 December 1948, and the instruments of ratification were exchanged on 23 May 1949 in Moscow. 8/ Before ratifying the agreement, the Norwegian Storting questioned the cession to the USSR of the three small islands in the Pasvikelv. The issue was dismissed, however, because the islands were regarded as being of no strategic or economic value, and it was agreed that under the terms of the 1826 convention the islands fell on the Soviet side of the line. The course of the boundary as marked in the mouth of the Jakobselv proved satisfactory to the Norwegians, since it permitted their fishing vessels to enter and leave the river without crossing the line. 9, 10/ The demarcation maps show the boundary along the channel of the river at low tide, which was the line held by the Norwegians during the dispute with the Finns over the issue following the 1925 investigation of the boundary.

B. Linear Description of the Boundary**

Only about one-fifth of the 121.6-mile-long Norwegian-USSR boundary is on land. The course of the remainder of the line is determined mainly by the deepest channels of the Pasvikelv (Figure 1) and Jakobselv and their associated lakes. (Figures 2 and 3.)

The westernmost point of the border is at Krokfjell Mountain, where the boundaries of Norway, Finland, and the USSR meet (see map 11738). From Krokfjell the boundary follows a southeasterly direction in a series of short, straight-line sectors through somewhat hilly, partly marshy terrain to the Pasvikelv, which it crosses to marker No. 11 near Grensefoss, a main breakpoint in the boundary. At that marker the entire river lies within Norway. From marker No. 11, the line takes a northeasterly direction, at first for 70 meters (229.66 feet), then down the steep slope of the Gelsomio Promontory and over to the Pasvikelv. It continues along the mountain lake Grensevatn (Grensevann) to marker No. 12, leaving Aittasaari (island) on the Soviet side. The Norwegian post stands on the east side of

^{*}The descriptive protocol includes: (1) a table of coordinates and elevations of the boundary markers and the points in the geodetic network along the boundary and (2) a list of the boundary markers.

^{**}In the following description of the Norwegian boundary, place names are those that appear on the official demarcation map (see footnote, p. 3); Russian forms are given in brackets and alternate names in parentheses.

Grenseneset Point on a hillock 165.1 meters (541.65 feet) from the boundary. The Soviet post is on the northwestern point of Aittasaari, 6 meters (19.68 feet) from a steep slope and 115 meters (377.29 feet) from the boundary.*

From marker No. 12 the boundary follows Grensevatn in a northeasterly direction to marker No. 14, leaving an islet having a boundary post on the Soviet side and Balgisholmen (island) on the Norwegian side. The boundary then extends in a north-northeasterly direction along the lake, with Bjørkholmen on the northern side. From this point the boundary continues in the same direction from Grensevatn (marker No. 16) out into the Pasvikelv (marker No. 17), and then follows the channel of the Pasvikelv for approximately 3.7 kilometers (about 2.3 miles) to marker No. 24, situated on a small wooded island on the Norwegian side. The boundary continues in a general north-northeasterly direction to marker No. 28, located on the northernmost islet of a group of three on the Soviet side; the Norwegian post stands on the east slope of a hillock, north of the mouth of Gjeddebekken Creek. From marker No. 28 the boundary extends along the channel chiefly in a northeasterly direction, passing wooded isles and rocks on the Norwegian side, to marker No. 30. At this point the boundary resumes a north-northeasterly course through Tangefoss, then turns toward the northeast past five small islands -- two on the Norwegian and three on the Soviet side -to marker No. 31.

The boundary passes from marker No. 31 along the channel of the Pasvikelv, first in a northeasterly direction past three isles on the Soviet side, and then in a north-northeasterly direction to marker No. 32, situated on a wooded island on the Soviet side. Maintaining the same course, the boundary goes past a group of reefs or sandbanks on the Norwegian side to marker No. 33, at which point it extends in a curved line toward the north-northwest, past a Soviet reef, and then toward the north-northeast, past a Norwegian reef, to marker No. 34. From there the boundary follows the channel to the northeast past two islands (Norwegian) to marker No. 35, then makes an arc, turning north to marker No. 36. The Norwegian post stands on the left riverbank, directly opposite the mouth of the Kornetijoki, 63.4 meters (208 feet) from the border; the Soviet post is on the right riverbank, on the south side of the mouth of the Kornetijoki, 100 meters (328 feet) from the border. The boundary

^{*}In most cases, only one of the two boundary posts on opposite sides of the border along the Pasvikelv and Jakobselv is mentioned here.

then passes along the channel in a north-northwesterly direction to marker No. 37 before curving toward the north-northeast to marker No. 38. On the Norwegian side the post is situated 300 meters (984.25 feet) southwest of a railroad track.

The boundary continues in a general north-northeasterly direction to marker No. 40, bending along the river to Hestefoss, then along the falls to marker No. 41. From marker No. 41 the boundary turns with the channel for about 3.3 kilometers (approximately 2 miles), passing numerous isles (Skiltholmen on the USSR side and Bjørnholmen and Sauholmen on the Norwegian side), to marker No. 46 on the right riverbank (Soviet side) 60 meters (196.85 feet) southwest of a dwelling house on the Höyhenjärvi /Kheykhen"yarvi] (Khoyhenyarvi)--Majatalo / Mayatalo / road. The AMS series Finland-Scandinavia 1:250,000 shows a graded road crossing the border north of Majatalo (Pechenga; NR 35,36-8: 58-767)* connecting Norwegian Highway 955 with the Arctic Highway on the Soviet side. From marker No. 46 the boundary goes in a general northeasterly direction to marker No. 48, passing a number of isles and islands, and then turns toward the northwest between Tjernholmen and Rittasaari to marker No. 49. North of Kisteholmen, at marker No. 50, the boundary takes an eastnortheasterly course along Lake Fjaervatn (Höyhenjärvi), passing an island (Jakolan-Lammasaari) on the Soviet side and a sandbank on the Norwegian side, to marker No. 51. The boundary continues along Fjaervatn for approximately 4.6 kilometers (about 2.9 miles) to marker No. 58, at which point it turns along the lake toward the north, past a Norwegian reef, and then follows the channel in the Pasvikelv toward the northeast to Jordanfoss (marker No. 59).

The boundary bends with the channel in the Pasvikelv past several reefs and isles before turning into Lake Vaggatem (Vaggetemjavrre) to marker No. 62. The Norwegian post stands on the western shore of the lake, 175 meters (574.14 feet) northwest of a narrow-gauge railroad track. The Soviet post stands on a promontory on the eastern shore of the lake, 85 meters (278.87 feet) north-northwest of the mouth of an unnamed creek. From marker No. 62 the boundary goes in a generally northerly direction, passing numerous isles, to marker No. 64. The Norwegian post stands on the western shore of the lake, 115

^{*}Locational indices given in parentheses refer to sheets of AMS Series M515, Finland-Scandinavia 1:250,000, and are keyed to the map sheets as follows: (1) name of sheet (given in first reference only); (2) sheet number, found in upper right-hand corner; (3) index number of north-south grid line nearest west of place or feature located; (4) index number of east-west grid line nearest south of place. Numbers that are underscored appear in larger type on the map.

meters (377.29 feet) southeast of Nesheim and 261.8 meters (858.92 feet) from the border. From here the boundary bends along the lake in an arc for about 2.6 kilometers (approximately 1.6 miles) to marker No. 68, leaving Gravholmen on the Norwegian side and Skolteholmen [Ostrov Chevessuolo] on the Soviet side. From this point to marker No. 78 the boundary extends in a general northerly direction past a number of isles -- Vaerholmen, Lavholmen, and Bjørnholmen -- on the Norwegian side and Krokholmen and Brannholmen on the Soviet side. In this sector the Skogly Farmstead is located on the Norwegian side southwest of marker No. 71. From marker No. 78 the boundary passes along Lake Vaggatem in an east-northeasterly direction to marker No. 80, at which point it continues along the Pasvikelv, then through the Vaggatemstryket (rapids) and an old riverbed (the Stein Rapids) to marker No. 85. In this stretch of the border, an isle, Brennholmen, is situated on the Soviet side.

The boundary passes from marker No. 85 along the old riverbed toward the northeast, first over a dry section, then over a deep pool, and past a Norwegian isle to marker No. 86; the Soviet post stands on the northwest side of Nivasaari, 23 meters (75.45 feet) from the border. From here the boundary follows an east-northeasterly course to marker No. 88, turns in a southeasterly direction along the channel of the Pasvikelv, and then passes through the Vakkerstryket Rapids to marker No. 90. From this point the boundary curves in an east-northeasterly direction out over Kattolampolo (lake) to marker No. 93, leaving the isle of Grasholmen on the Norwegian side. Continuing in the same direction for approximately 2.1 kilometers (about 1.3 miles) the boundary extends to marker No. 97, with Sauholmen situated on the Norwegian side, then turns along the channel of the Pasvikelv in a northeast-southeast arc to marker No. 98. Norwegian post stands on the left side of the river, on the southwestern part of a promontory 225 meters (738.18 feet) southsoutheast of the end of a narrow-gauge railroad track, and 54.6 meters (179.13 feet) from the border. From marker No. 98 the boundary passes toward the east and northeast through Kobbfoss to marker No. 99, then arches toward the south-southeast along Lake Langvatn (Bossojavrre) to marker No. 100. From here the boundary continues south-southeastward to marker No. 102, where it makes a bend in an east-southeasterly direction to marker No. 103. The boundary curves slightly along the lake in an east-northeasterly direction from marker No. 103 to No. 104, leaving Aittasaari on the Soviet side and Hareholmen on the Norwegian side. Maintaining a northeasterly direction for approximately 7.1 kilometers (about 4.4 miles), the boundary extends to marker No. 118. In this sector Kaurinkisaari is on the Soviet side and Langnes (peninsula) and Frigard and Lyng Farmsteads are on the Norwegian side.

From marker No. 118 the boundary passes along the lake in an arc toward the north-northeast, with Niskasaari on the Soviet side, to boundary marker No. 119. The Norwegian post stands on the left shore of the Pasvikelv on the point of a small promontory 65.1 meters (213.58 feet) from the border. Continuing in a north-northeasterly direction, the boundary extends from Langvatn out over the Pasvikelv, following the channel through the Skogfoss (Hakokoski) (Figure 4) to marker No. 122, leaving an isle and reefs on the Norwegian side and five isles and reefs on the Soviet side. The Norwegian post stands on the left shore of the rapids, 80 meters (262.46 feet) south of the northern end of a narrow-gauge railroad track, and 71.6 meters (234.9 feet) from the border. The boundary passes from marker No. 122 along Skogvatn in a line curving first northeast then northnorthwest, with sandbanks on the Norwegian side, to marker No. 123. The Norwegian post stands on the western shore of the lake, 30 meters (98.42 feet) south of the nearest house on Bjørklund, 400.1 meters (1,312.6 feet) from the border. The Soviet post stands on the eastern shore of the lake, on the southwestern side of Harrnes Point, 65 meters (213.25 feet) from the border. From marker No. 123 the boundary extends along the lake close to the western end of Harrnes, then toward the north-northwest past Grasholmen and a smaller islet south of it on the Soviet side, to marker No. 124. Here it passes through a narrow strait with a strong current at the Lillestrømmen, describing an arc toward the northeast, to marker No. 125. In a winding but generally east-northeasterly course along the lake, with two small isles and Gravholmen on the Soviet side, the boundary extends to marker No. 129, leaving Fuglebukta (bay) and Grasholmen on the Norwegian side. The Norwegian post stands on the northwestern shore of the lake, 80 meters (262.46 feet) west-northwest of the south end of a narrow-gauge railroad track and 60.2 meters (197.5 feet) from the border. The Soviet post stands on the southeastern shore of the lake, at the northwestern end of Koskennis-Kanniemi Cape, 16 meters (52.49 feet) from the shore and 125 meters (410 feet) from the border.

From marker No. 129 the boundary passes first along the channel toward the southeast and then along Melkefoss (Maitokoski) in a general northeasterly direction for about 4.7 kilometers (approximately 2.9 miles) to marker No. 136. In this sector, Norwegian post No. 133 stands 50 meters (164 feet) northeast of a dwelling house at Mikkelstad. Huhmunsaari Island (marker No. 134) is on the Soviet side of the border.

From marker No. 136 the boundary follows a general southeasterly direction to marker No. 140, then extends along the channel of the Pasvikelv in an arc toward the south and southeast to marker No. 141, situated on Litle Skogøy (on the Norwegian side). The posts on both sides of the border are located in marshy terrain. Soviet post No.

141 stands on the right riverbank, on the eastern point of a promontory at the left side of the mouth of the Menikkajoki, 708 meters (2,323 feet) from the border. The boundary extends from marker No. 141 eastward along the channel, then via Svanvatn (Salmijärvi) in an east-northeasterly direction to marker No. 144. The Norwegian post stands on the northwestern shore of the lake, on Bjørknes Point, terminus of the road from Svanvik, 531.9 meters (1,745 feet) from the border. From marker No. 144 the boundary follows a north-northeasterly direction for approximately 5.3 kilometers (about 3.3 miles) to marker No. 152. In this sector Østre Skrøytnes, Tangen, Myreng, and Framnes Farms are on the Norwegian side. Marker No. 150 is located on the northwestern shore of Bjørnsund, 61 meters (200.13 feet) northeast of the southernmost dwelling house on Utnes. Norwegian post No. 151 stands on the northwestern shore of the sound, on Langues (point) 318.4 meters (1,044 feet) from the border. In this same area, Soviet post No. 147 stands on the southeastern shore of Lake Svanvatn, 215 meters (705.38 feet) west of the fork on the Petsjenga /Pechenga/--Rovaniemi road (Arctic Highway).

From marker No. 152 the boundary follows the sound in a northnortheasterly direction for a few kilometers to marker No. 156, leaving an islet south of Furumo on the Norwegian side. From marker No. 156 the boundary turns in an arc toward the northeast and northnorthwest along the Björnsund to marker No. 158. From here the boundary extends along the channel of the Trongsund in a general northerly direction to marker No. 164 -- a distance of approximately 2.5 kilometers (about 1.6 miles). Norwegian post No. 164 stands on the western shore of the sound, on the east side of a promontory, 65 meters (213.25 feet) northeast of the Trongsundneset Farm. The boundary runs from marker No. 164 along the channel of the Trongsund, then across Björnvatn (Kontiojärvi) in a general northerly direction to marker No. 167. The Norwegian post stands on a promontory on the western shore of the lake, 32 meters (104.98 feet) northeast of the road between Kirkenes and Svanvik. From marker No. 167 the boundary passes along the lake in a curved line in a north-northeasterly direction and then to marker No. 169, a cairn set up on the southern point of Store Grenseholmen in 1896 and restored in 1947. The boundary then proceeds along a border road toward the north-northeast via Store Grenseholmen to marker No. 172, where it continues in a northeasterly direction along the channel of the Pasvikelv between Litleholmen on the Norwegian side and an unnamed isle on the Soviet side, to marker No. 173. The Norwegian post stands on the left river bank on the Kirkenes-Holmfoss road, near a destroyed bridge, 108.4 meters (355.64 feet) from the border. The Soviet post stands on a promontory, on the right riverbank 15 meters (49.21 feet) west of the Holmfoss-Ahmalahti road and 150 meters (492.12 feet) from the border.

From marker No. 173 the boundary bends along the middle of the river in an east-southeasterly direction, then turns in a northeasterly direction past two small islands (one on each side of the border) to marker No. 174. The Norwegian post stands on the south point of Floytarneset Cape, 135.5 meters (444.55 feet) from the border. Nordmo Farm is located to the northwest of marker No. 174. Continuing in a north-northeasterly direction, the boundary extends along Klistervatn to marker No. 176, leaving Skolteholmen on the Norwegian side. From here the boundary winds along the lake, first toward the northeast then toward the north and northwest, to marker No. 178. The Norwegian post is situated on the top of wooded Ellenholmen Island, 390 meters (1,279.5 feet) from the border. From marker No. 178 the boundary winds along the lake in a northnortheasterly direction to marker No. 181, then turns in a northnorthwesterly direction to marker No. 182. In this sector, Norwegian post No. 179 stands on the western shore of the lake, on the southern part of Fjellfrossneset Point, 320 meters (1,049.86 feet) from the border, and the Soviet post stands on a steep mountain slope on the eastern shore of the lake, 160 meters (524.93 feet) west of the Storskog-Ahmalahti road. From marker No. 182, the boundary passes along the lake, first in a northnorthwesterly direction and then bending toward the north-northeast, to marker No. 183, where it curves again in a general northwesterly direction, which it maintains for about 2.8 kilometers (approximately 1.7 miles) to the northern end of the lake (marker No. 187). In this area Iso Palossari /Ostrov Iso Palosari is on the Soviet side.

From marker No. 187 the boundary continues along the Pasvikelv in a north-northwesterly direction toward Harefossen, then along the middle of the falls to marker No. 189. The Soviet post stands on the right bank of the falls, on a mountain ridge to the north, 50 meters (164 feet) west of a narrow-gauge railroad. From marker No. 189 the boundary follows the middle of the river rapids (below Harefossen) along a northwesterly course to marker No. 190, then turns in a northeasterly direction to marker No. 191. The Soviet post stands on a wooded gravel hill on the right riverbank, 30 meters (98.42 feet) west of the Skoltefossen-Ahmalahti road. From this point the boundary trends generally northward, first along the middle of the rapids in the Pasvikelv, then along Fossevatn, past two islands on the Soviet side and one on the Norwegian side, to Boddiholmen (marker No. 192). The boundary then extends along the middle of the lake in a general north-northwesterly direction to marker No. 196 at Skoltefossen, where it leaves the Pasvikelv (a breakpoint).

In the Pasvikelv, the boundary follows the deep channel and, for the most part, it also follows the middle of the lakes. Except for Skolteholmen Ostrov Chevessuolo and Nivasaari Ostrov Nivasaari, the islands in the river and lakes are allocated to the country on whose side of the channel they lie. Only a few islands or sandbanks are crossed by the boundary, the only one of significant size being Store Grenseholmen Ostrov Sture Grense-kholmen, on which markers Nos. 169-171 are located.

After leaving the Pasvikelv, the boundary proceeds in a straight line to the west for about 1.8 kilometers (about 1.1 miles) to marker No. 208 (a breakpoint). In this sector the boundary traverses a barren mountain, crosses a path, a marsh, a winter road, and Lake Georgsvatn (Jokonjärvi). From marker No. 208 the boundary turns in a north-northwesterly direction, first down the barren slope of Georgvasstoppen, and then over rolling terrain west of Eskiöjärvi to marker No. 209. The boundary continues in the same direction over a barren, rounded mountain to marker No. 211, situated on top of Grensefjell (a breakpoint), where it turns in an east-northeasterly direction to marker No. 212, located on a barren mountain on the northwestern slope of Karhunpää. From here the boundary follows an east-northeasterly course to marker No. 216, which stands at the west side of the Kirkenes-Kolttakengyas (Boris Gleb) road, then crosses the Pasvikelv to marker No. 219 on the right bank of the river. This sector of the boundary encircles the town of Kolttakengyas and leaves an area of more than 1.5 square miles on the west bank of the Pasvikelv under Soviet control. The Soviet Union also has complete control of the river for approximately 2

From marker No. 219 the boundary continues in a straight line in an east-northeasterly direction across increasingly rough terrain to marker No. 222 on Russefjell Mountain (a breakpoint), where it turns to the southeast. The boundary extends in that direction for about 1 kilometer (0.62 mile) to marker No. 226, located on the western shore of the northwestern inlet of Lake Pikevatn (Neitijärvi). From there it crosses the lake to marker No. 230, situated on the west side of the Storskog-Ahmalahti road, then continues in a southeasterly direction up a barren mountain slope to marker No. 233, a cairn erected at an earlier date and restored in 1947, on the top of Vardehaug (hill). From marker No. 233 the boundary turns slightly to the south-southeast and continues down the mountain slope in dense forest and marshland to marker No. 236, which stands on the western shore of Langvatn. The boundary maintains the same course for approximately 3.6 kilometers (about 2.2 miles) to marker No. 248. In this sector, marker No. 240 is located on the top of Storslattfjell and No. 245 is on the northwestern slope of Vardefjell. The boundary

continues to follow a southeasterly course across rising terrain to marker No. 249, located on a small mountain knoll 140 meters (459.31 feet) southeast of the southernmost end of Fiskevatn, then down a steep mountain slope and across a brook between Hamborgvatn and Joosepinjärvet to marker No. 251. Maintaining a southeasterly direction, the boundary extends along a border lane, across a depression with a little brook, then up a very steep slope Höghaugen (markers Nos. 252 and 253), from which point it continues over slightly rising terrain, a barren mountain, and a marsh with sparse plant growth to marker No. 254.

The boundary continues from marker No. 254 in the same direction over rising terrain for approximately 2.6 kilometers (about 1.6 miles) to marker No. 264. In this area the border crosses Serdivatn (Siertijärvi) and the slopes of Siertitunturi and Aborvassfjell. From here the boundary passes in a southeasterly direction to Grensevatn (Rajajärvi), marker No. 268, crosses the lake, and continues to marker No. 274, which stands on the northeastern slope of Pieni Vohtastunturi. The boundary continues a southeasterly course to marker No. 278, then turns in a slightly more southerly direction to marker No. 279 just southwest of Hundvatn. Boundary marker No. 278 (a cairn erected in 1925 and restored in 1947) is located on the southwestern slope of Hundvasshaugan. In this entire sector -- from marker No. 219 to No. 279 -- the border crosses fairly rugged land, barren mountains, moors, marshes, and numerous small lakes and ponds. From marker No. 279 (a breakpoint), the boundary extends in an easterly direction to marker No. 285, situated 245 meters (803.8 feet) northeast of the eastern end of Kuasjärvi. From marker No. 285 the boundary turns slightly, taking an eastsoutheasterly direction to marker No. 290, located on a wooded moraine ridge east of a small depression, 20 meters (65.61 feet) north from Tardenmyran. From here the boundary continues in the same direction along rocky, open terrain to marker No. 293, situated 400 meters (1,312 feet) north of the summit of Lasertunturi, at which point it turns in a slightly more southerly direction, but continues generally east-southeast for about 3.3 kilometers (approximately 2 miles) to marker No. 302, where it joins the Jakobselv. As in the Pasvikely, the boundary follows the deep channel and, in general, the middle of the lakes through which it passes. Islands are allocated to the country on whose side of the channel they lie.

The boundary continues from marker No. 302 in a general east-southeasterly direction to the point of directional change in the Jakobselv where it meets the river's channel. From this point the boundary runs along the channel, first turning north and then veering sharply toward the east to marker No. 304. It then follows the river in a general east-southeasterly direction, past an isle on the

Norwegian side, to boundary marker No. 308. From here the boundary swings along the channel in an arc to marker No. 309. At a rock isle on the Soviet side the boundary extends in a southeasterly direction to marker No. 310. The boundary winds along with the channel, in general in a southeasterly direction, to a point where the river widens, flowing around a small wooded isle, to marker No. 313 (on the Soviet side). At that marker the boundary turns to the northeast, past two isles on the Norwegian side and one on the Soviet side, to marker No. 314, then extends in the same general direction for about 2.3 kilometers (approximately 1.4 miles) to marker No. 322. Norwegian post No. 322 stands on the steep left riverbank, 50 meters (164 feet) northeast of the mouth of a brook and 20.5 meters (67.25 feet) from the border. The Soviet post stands near the right bank, on marshland skirted by a river bend (where a brook flows out of the marsh), 15.8 meters (51.83 feet) from the border. The boundary continues from marker No. 322 along the channel in an east-southeasterly direction to marker No. 323, then turns in a north-northeasterly direction, past an isle on the Soviet side, toward Jakobselvvatn (Vuoremijärvi) to marker No. 325.

From marker No. 325 the boundary goes along the lake in a general northeasterly direction to its outlet (marker No. 330). The boundary then continues along the channel of the Jakobselv in a northeasterly direction along the rocky riverbed, with an isle on the Soviet side, and then on toward the north between seven islets (four on the Norwegian side and three on the USSR side) to marker No. 331. Maintaining the same general northeasterly direction, the boundary extends for about half a kilometer to marker No. 334, situated on the Pechenga-Tarnet road. The Norwegian post stands on the left riverbank on the west side of the road from Tarnet, near a partially destroyed bridge. The Soviet post stands on the right bank, also west of the road to Pechenga and near the same bridge. From marker No. 334 the boundary follows a north-northeasterly then northeasterly course to marker No. 336, at which point it turns northward to Langvatn (marker No. 337). The boundary follows the lake in a northerly direction to marker No. 338. The Soviet post stands on the eastern shore of the lake, on the wooded slope of a hill, 70 meters (229.66 feet) south of the outlet of the Sulajoki and 84.5 meters (277.23 feet) from the border. The boundary continues northward along the lake to marker No. 339, from which it swings to the northeast and then north again to marker No. 340. The Norwegian post stands on the western shore of the lake, 260 meters (853 feet) northeast of the mouth of the Korpelva, and 49.5 meters (162.4 feet) from the border. From here the boundary proceeds northward along the lake to its outlet into the Jakobselv and then northwest along the channel to marker No. 341, whence it follows the winding channel northward to marker No. 342, situated on an islet on the Soviet side.

The boundary continues from marker No. 342, at first along the channel in the Jakobselv and then out into Lake Rundvath, before extending toward the north and northeast along the lake and again along the channel of the river to marker No. 343. From here the boundary continues northward to marker No. 346, where the Norwegian post stands on the left riverbank on the northern point of a wooded promontory. The Soviet post is located on the right bank, at the northern end of a marsh strip where the river flows into Lake Trollvatn. From marker No. 346 the boundary goes' in a northwesterly direction along the lake, then follows the channel in the Jakobselv to marker No. 348, at which point it turns in a northeasterly direction to No. 349, leaving an isle on the Norwegian side and three on the Soviet side. From marker No. 349 the boundary extends in the same direction, past two Norwegian isles and one Soviet isle, to marker No. 350. It follows a northerty course along Lake Kjosen, then turns in a northeasterly direction to marker No. 352. From here the boundary extends toward the northeast along some rapids and then in a general northerly direction to marker No. 353, at which point it follows the bends of the channel for approximately 2.7 kilometers (about 1.7 miles) to marker No. 358. In this sector the boundary passes numerous isles along Rundholen, a wide section of the river.

From marker No. 358 the boundary follows a general northwesterly course past a number of islets to marker No. 362; the Sandvasselv enters the Jakobselv on the Norwegian side of the border between markers Nos. 360 and 361. The boundary then continues in a northnorthwesterly direction to marker No. 364, with several wooded islands on both sides of the border. The Norwegian post stands on the left riverbank, 66 meters (216.53 feet) north of a hut (Elveheim), and the Soviet post stands on the lower right bank, at the northern tip of two small rock islands. From marker No. 364 the boundary continues along the channel, swinging to the west and then the north in a sharp curve, to marker No. 365, whence it continues along the channel in a north-northwesterly direction, past three isles on the Soviet side and two on the Norwegian side, to marker No. 366. The boundary then turns in a northeasterly direction to marker No. 367, where it makes a double bend toward the southeast, the northwest, and back to the east-southeast to marker No. 368. It then swings along the channel in another horseshoe curve around Langletneset, passes two isles on the Norwegian side, and turns to the north-northeast to marker No. 369. From there the boundary travels in a general northerly direction (first northeast, then northwest) to marker No. 372, from which point it swings along the channel in three sharp turns, chiefly west-northwest, leaving five isles on the Soviet side, to marker No. 373.

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The boundary continues to marker No. 374 along the channel in a northwesterly direction, turning west-northwest and passing two islets on the Soviet side, to marker No. 375, where it turns in a north-northeasterly direction to marker No. 376. Passing along the channel of the river, which bends around two promontories --Storsteinneset on the Norwegian side and an unnamed peninsula on the Soviet side -- the boundary extends in a generally northwest direction to marker No. 378, then winds toward the northwest, west, and north over some rapids to marker No. 379. Continuing in a general northwesterly direction to marker No. 382, the boundary turns toward the northeast past a small brush-covered isle on the Soviet side to marker No. 383. The Norwegian post stands on the low, rocky left riverbank, 120 meters (393.7 feet) south-southeast of the Björnstad Farm and 33 meters (108.26 feet) from the border. Curving along a bend in the channel toward the east and southeast past the mouth of the Tverrelva River to marker No. 384, the boundary extends in a general northerly direction (first east and then west) to marker No. 386. In this sector the Norwegian post stands on the left bank, on a large crag 4 meters (13.12 feet) west of a road running between Lillesanden and Björnstad. The boundary turns from marker No. 386, first in a northeasterly direction, then bending sharply toward the east and then the northwest, to marker No. 387, located on a low, wooded promontory on the Norwegian side, 170 meters (557.74 feet) northeast of the Heimdal Farm and 36 meters (118.11 feet) from the border. The Soviet post stands on the right riverbank, at the edge of a steep wooded slope 16.5 meters (54.13 feet) from the border.

Continuing to wind along with the channel in a general northnorthwesterly direction, the boundary extends approximately 3.5 kilometers (about 2.2 miles) to marker No. 394. In this area, Norwegian marker No. 391 is situated 52 meters (170.6 feet) northeast of a school at Eggemoen, and marker No. 394 is located 140 meters (459.31 feet) from the Heggdalsmo Farm. The Soviet post stands on the right riverbank, on a low, rocky sandbar 13 meters (42.65 feet) from the foot of the northwestern slope of Pikkutunturi Mountain. The boundary then twists and turns in sweeping curves along the channel, chiefly to the northwest, to marker No. 400, then turns in a general westerly direction to marker No. 401. In this sector Norwegian post No. 396 stands on the left bank of the Jakobselv, on a steep mountain slope descending from Övreflåg, 5 meters (16.4 feet) west of the Lillesanden-Björnstad road, and post No. 399 is located on a steep dip descending from Nedreflag, 7 meters (22.96 feet) east of that road. From marker No. 401 the boundary follows a general northwesterly course to marker No. 404, then turns toward the north to marker No. 405. The Norwegian post stands on the left riverbank on the northeast corner of Finngammneset Point, 286.3 meters

(939.3 feet) from the border. From marker No. 405 the boundary goes along the deep channel toward the north-northwest, past a large sandbank that divides at Storbekken, to marker No. 407. From here the boundary extends in the same direction for less than a kilometer to marker No. 411, with the Norwegian post on the left bank at the northeast end of Storsanden, and the Soviet post near the top of a crag on the right bank, 9.6 meters (31.5 feet) northwest of a cairn that was erected in 1826 and bears the old number 363.

At low tide, numerous sandbanks are exposed in the wide section of the Jakobselv south of its mouth. The boundary in this area follows the channel of the river at low tide, which places it close to the Soviet side of the estuary (see map 12104). The boundary continues near the Soviet bank through the narrows to marker No. 412, the last marker at the mouth of the river. Between markers Nos. 412 and 415 the boundary is marked by a series of sight lines from boundary markers and by special sight markers. From marker No. 412 the boundary goes north-northwest in a straight line for 47.8 meters (156.8 feet), north for 214 meters (702 feet), and again north-northwest for 429 meters (1,407 feet) to the final marker, No. 415.

C. Boundary Marking, Administration, and Security

The land boundary between Norway and the USSR is marked by pairs of wooden posts or by single stone cairns (Figures 5 and 6). Each marker is visible from the next, and in no case are the markers more than 1 kilometer apart. Double markers on land are placed at a distance of 2 meters (6.56 feet) on either side of the line, and the line itself is indicated by a small wooden post or by the center of a 25-centimeter (9.84-inch) circle carved in rock. A cleared strip along the entire land boundary measures 8 meters (26.24 feet) in width, which, in the case of the double markers, includes the 4 meters (13.12 feet) between the posts and 2 meters (6.56 feet) behind each post. Markers Nos. 11, 208, 211, 222, and 279, at the main breakpoints (changes of direction) in the boundary (see map 11738), are old stone cairns, which were restored in 1947.

Where the boundary follows the Pasvikelv and the Jakobselv, it is marked by double posts, one on either side of the river or lake, or one on a bank (Figure 7) and one on an island. North of the mouth of the Jakobselv is the northernmost marker of the 1947 boundary, marker No. 415. This is a buoy stake anchored at a depth of 17 meters (55.77 feet).

Most of the boundary posts are 2 meters (6.56 feet) high and 22 centimeters (8.66 inches) square. The Norwegian posts are

painted yellow with black tips, and the Soviet posts are painted in alternating red and green stripes with red tips.

A very detailed agreement dealing with border activities and providing means for the settlement of conflicts and incidents was signed on 29 December 1949. The agreement went into effect on 30 October 1950, after exchange of instruments of ratification in Moscow. 11/

The agreement provides regulations for the following: (1) the inspection and maintenance of markers and a cleared strip (vista) along the boundary; (2) the use of boundary streams and lakes, including shipping, log floating, and fishing; (3) land use along the land boundary, including hunting, agriculture, and mining; (4) the avoidance of incidents; and (5) the solution of disputes and the enforcement of the provisions of the agreement. Article I states specifically that the boundary extends under the ground and into the air. Points 2 and 3 are of particular interest, since their effectiveness in guaranteeing to residents of the border areas the right to pursue their means of livelihood will determine whether the course of the boundary will be subject to dispute in the future.

The provisions for the movement of vessels and for fishing apply to both the Pasvikelv and Jakobselv, but the regulations on timber floating apply only to the Pasvikelv, probably because the Jakobselv area is almost barren. Vessels may use the main channel, even if they must cross the line to do so, in the narrow sections of the Pasvikely between markers Nos. 9 and 10 and at marker No. 196 and along the entire Jakobselv boundary. This permits Soviet travel through the part of the Pasvikelv that lies wholly within Norway. Limitations at marker No. 196, on the other hand, prohibit Norwegian transport through the Soviet Kolttakengyas area, thus preventing Norwegian use of the river as a route to and from the sea. Above this area, the river would not be a main waterway even if it were open, since only shallow Lapp boats can navigate above the Sovietheld portion and portages are necessary at the falls and rapids. In the larger lakes the only vessels allowed to cross the boundary are those used in log floating, which may do so under certain conditions.

Fishing is allowed up to the boundary, but fishing zones are not defined by marker numbers. Presumably fishing by nationals of the USSR is not permitted in the part of the Pasvikelv between boundary markers Nos. 9 and 11, which belongs to Norway, or by Norwegians in the Kolttakengyas region, which belongs to the USSR. Both travel along and fishing in the rivers at night are prohibited

except on the larger lakes, where vessels must stay at least 200 meters (656.2 feet) from the line and be adequately lighted. All vessels must be marked clearly, and landing on the bank of the other country is allowed only in case of distress.

Limitations on the floating of timber are not so strict. Normally, logs may be floated freely through the two sectors of the Pasvikely that lie entirely on either the Norwegian or Soviet side This is a distinct advantage to the Norwegians, since of the line. it gives them access to the mouth of the Pasvikelv, which lies in their territory. Soviet regulation has disturbed the water level in some areas to such a degree, however, that log floating by Norwegians has been restricted. Until special agreements have been reached on control of the water level of the Pasvikelv, the Norwegians will probably avoid the risk of having timber lie dry in the riverbed. The boundary administrators are to decide by 1 April of each year when timber may be floated in the area. Foremen and crews are allowed to cross the river and work on the opposite bank by daylight to set up installations essential to the floating activities. At least 5 days' notice of such a boundary crossing must be given to authorities of the other country, and the workers must have special certificates from their boundary commissioner. Timber floated down the river is not subject to customs or other duties.

Agriculture, lumbering, and mining are to be carried on without violating or damaging territory or property of the other country or crossing the boundary for any reason. Wild animals and birds are not to be shot or pursued across the boundary. The other party must be notified of dangerous forest fires across the boundary, or of trees that have fallen across the line, which will then be cut and returned. Mineral deposits may not be explored or exploited in a manner that might cause damage on the other side of the boundary. (Figure 8.) These activities are prohibited within a 20-meter (65.6-foot) strip along the boundary unless the two parties agree to an exception and make adequate provisions to "insure the preservation of the boundary line."

Conflicts and incidents resulting from nonconformance with the regulations or from such issues as injury of persons living on the other side of the boundary, unapproved crossings and communications, animals straying across the boundary, photographing of parts of the other country, and damaging of markers are to be handled by the boundary commissioners. Serious issues may be negotiated through diplomatic channels, but provision is made for returning such issues to local authorities for discussion. (Figure 9.)

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The 1949 regime agreement provided for the concluding of special agreements regarding the construction of any installations on the boundary rivers that might affect the flow or level of water. Before the regime agreement was drawn up, some Norwegian farmland in the valley had been flooded during the summer and suffered from drought in the fall because the USSR had dammed the river and regulated the water level, probably in connection with the Yaniskoski powerplant upstream beyond the southern end of the Finnish-USSR boundary. The problem of waterflow seems likely to become increasingly significant since the Yaniskoski dam has been completed. Another dam is under construction at the Rajakoski (Ragjeguoikka) (falls) and possibly still another on the Pasvikelv near Kolttakengyas.

The great number of boundary restrictions necessitates a system of almost constant patrol, particularly in the settled Pasvikelv Valley. The Norwegians, as a result of the December 1949 agreement, planned to expand their frontier police force and, in response to Soviet protests against Norwegian boundary crossings, to have a permanent police force in the frontier areas where settlement is comparatively dense. According to recent press reports, the Norwegian Government, in connection with the next national budget, will recommend that the present border patrol be almost doubled in strength. If the reported proposals are put into effect, a force of approximately 50 men will patrol the 122-mile-long Norwegian-Soviet frontier. The recommendations will also include the construction of houses and watchtowers to facilitate the work of the border guards.

The USSR has placed wooden watchtowers at points along the Pasvikelv portion of the boundary averaging one-half kilometer (1,640 feet) apart and about 200 yards behind the line. 12/ Although the border is watched closely by Soviet guards, it is apparently possible to cross undetected during the summer. The Soviets can "organize a very effective pursuit" if an illegal crossing is suspected, 13/ but the Soviet side of the border does not appear to be as heavily guarded here as farther south.

D. Maps of the Boundary

The exact location of the present Norway-USSR boundary is shown best on the official 1947 demarcation map at 1:25,000 (1 in list of citations at end of this section). Ranking second is the Norwegian topographic map series at 1:100,000, which shows the Norwegian version of the line. No large-scale Soviet maps produced since the USSR acquired Pechenga are available. Two sheets of a 1941 Soviet map at 1:500,000 (2) show the boundary, but this is neither an official presentation of the line (the Pechenga area was still a part of Finland) nor of much value in tracing the actual detailed course of

the boundary, since the scale is too small. Consequently the present Soviet area is covered only by some very old Finnish map series.

Maps at scales smaller than 1:100,000 do not show adequately such detailed features as islands and sandbanks in the boundary rivers, which have been the main subjects of dispute. Sheet No. 35, 36-8, Pechenga, of the AMS 1:250,000 series (3) shows the boundary line at that scale as "approximate." For the Jakobselv area even the scale of 1:100,000 is much too small, and sufficient detail is given only on the 1947 demarcation map (1) and the Finnish 1:20,000 maps (4). Usefulness of the Finnish maps is limited because of the early date (1928-33) of the surveys on which they are based; changes in the thalweg and islands of the rivers since the surveys were made have altered the position of the boundary considerably. Furthermore, the map does not show the boundary symbol in the estuary of the Jakobselv and the waters to the north, and the available sheets cover the boundary only as far south as approximately 69°20'N.

Finnish coverage of the boundary area at scales of 1:100,000 and 1:200,000 is spotty, the former covering approximately the same area as the 1:20,000 series and the latter covering only the southernmost part of the boundary. Although the scale is too small to show boundary detail, Finnish map coverage of the boundary is provided by the 1:400,000 general map of Finland (5). The most recent date of this series is 1946, but a supplementary sheet has been issued that shows later boundary revision, including the delineation of the new Finnish-Soviet boundary in the Yaniskoski-Niskakoski area.

German maps and the British GSGS maps of the border area are based on the Norwegian and Finnish series, with the boundary line apparently taken from the Norwegian 1:100,000 series.

The boundary demarcation map (1) is more useful than the descriptive protocol because it shows the exact position of the line; the protocol merely supplements the information shown on the map. The demarcation map locates the boundary line and its 415 markers and carries topographic detail for strips 0.5 kilometer (1,640 feet) wide on both sides of the line, including the areas along the banks and shores of boundary rivers and of all but the largest boundary lakes. The markers are located on the map with an error of not more than 0.2 millimeter, and topographic detail within the boundary strip is plotted with almost equal precision.

1. <u>Karta gosudarstevennoy grantisy mezhdu Soyuzem Sovetskikh Sotsialisticheskikh Respublik i Norvegiey</u> (Map of the State Boundary Between the USSR and Norway); 1:25,000; Smeshannaya Soyuza

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SSR i Norvegii Komissiya po demarkatsii gosudarstvennoy granitsi mezhdu SSR i Norvegiey (Mixed USSR and Norwegian Commission for the Demarcation of the State Boundary between the USSR and Norway); 18 pozalid sheets, each in both Norwegian and Russian, 1947; CIA Map Library Call No. 74710.

- 2. /General Staff of the Red Army Topographic Map/; 1:500,000; General Staff of the Red Army; Sheets Ozero Inari and Murmansk, 1941; Army Map Service Library Call No. N-3-30-57049-500, Sheets Nos. R-36-C and D and R-35-C and D.
- 3. Finland-Scandinavia 1:250,000; Army Map Service Series M515; 1953; AMS Library Call No. IM 3-30-90,000-250.
- 4. Topografinen Kartta (Topographic Map); 1:20,000,

 /Finnish/ Maanmittaushallitus (General Survey Office); Sheets

 Vuoremi, Pasaritunturi, Kivitunturi, Vuoremijärvi, Maajärvi,

 Kuvernöörinkoskik Vohtasjärvi, Janiskoski-Kolttaköngas, Valasjärvi,

 Salmijärvi, Menikka, and Pitkäjärvi, 1941 reprints; AMS Library

 Call No. 21M-23-30-37509-20. (These sheets may be consolidated with
 the new Finnish series, Peruskartta, which has replaced the Topografinen Kartta.)
- 5. Suomen Yleiskartta (General Map of Finland); 1:400,000; Finnish Maanmittaushallitus; Sheet A 4, 1946; AMS Library Call No. 21M 3-29-37505-400.



Figure 1. Pasvikelv River, separating Norway, on the right, from Soviet territory (formerly a part of Finland), on the left.

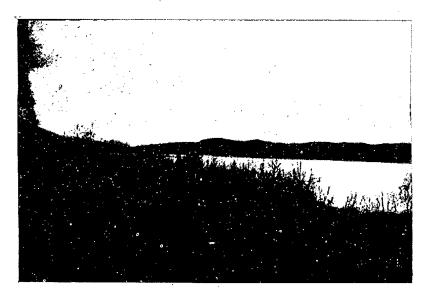


Figure 2. Another part of the Norwegian-Soviet boundary, taken from a frontier post.

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Figure 3. Terrain along Norway-USSR boundary; Soviet Union on far side of river (1948).



Figure 4. View across the Pasvikelv from the Norwegian guard post at Skogfoss; Soviet observation tower on the summit opposite (1947).



Figure 5. Marker posts along the land boundary.



Figure 6. View of boundary cairn.

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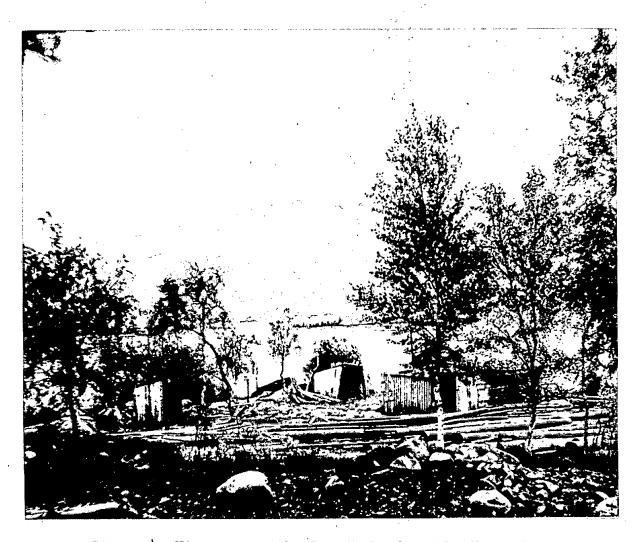


Figure 4. View across the Pasvikelv from the Norwegian guard post at Skogfoss; Soviet observation tower on the summit opposite (1947).

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Figure 5. Marker posts along the land boundary.



Figure 6. View of boundary cairn.

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Figure 7. Norwegian boundary marker No. 120, Skogfoss (1947).



Figure 8. Air view into the Soviet Union from the Norwegian side of the border. The smokestack probably identifies the nickel proccessing plant at Nikel', USSR.



Figure 9. Border-crossing point at Storskog; the Norwegian and Soviet commandants hoist their respective national flags on the tall poles when they wish to confer (1947).



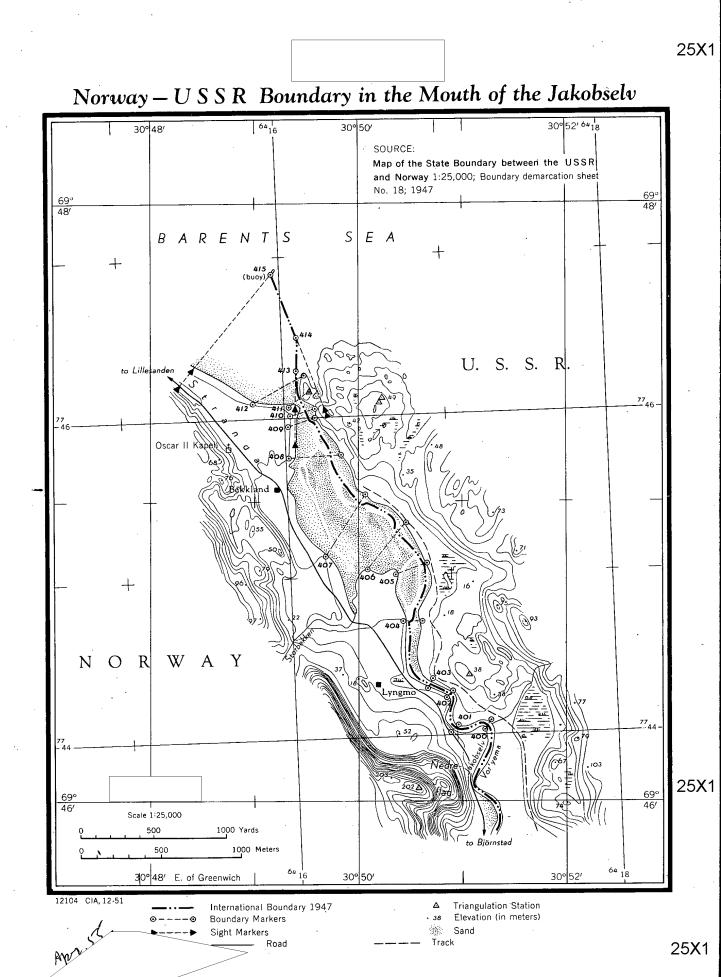
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II. Finland-USSR Border

A. History of the Boundary

In 1899, Russia, with which Finland had been united since 1809 as a semi-independent Grand Duchy, began a policy of Russification with the purpose of restricting the constitutional and civil liberties of Finland. After the Russian Revolution of 1917, however, Finland was proclaimed an independent state, and a peace treaty between the new Finnish Republic and the Soviet Union was signed in Dorpat (Tartu) on 14 October 1920. By the terms of that treaty, the USSR recognized Finland "within the boundaries of the Grand Duchy of Finland, as an independent and self-subsistent nation." According to Article 4 of the treaty, the Petsamo /Pechenga/ region was to be ceded to Finland, 14/ which thus gained an outlet on the Arctic Ocean. Article 5 of the treaty stipulated that the Governments of Finland and the USSR were to appoint a special commission, consisting of two members from each country, to delimit and demarcate the frontiers. A general protocol covering the course of the boundary from the Gulf of Finland to Vaitolahti on the Arctic Ocean was signed in Moscow on 28 April 1938. It was stated that by this action the boundary delimitation begun in 1925 and completed on the ground in 1934 had been "definitely established." 15/ The Treaty of Dorpat also provided for the withdrawal of Finnish troops from the communes of Repola and Porajärvi and the reincorporation of these communes into the Soviet Union.

In January 1939 Finland and Sweden signed an agreement for the joint fortification of the Aland Islands. This proposal aroused Soviet protests, although other interested nations gave their approval. By the fall of 1939 (14 October) the Soviet Union, in order to strengthen the security of Leningrad, presented a specific set of demands to the Finnish Government. These were (1) the cession of a number of strategic islands in the Gulf of Finland; (2) the relinquishing of territory in the southeast (the Karelian Isthmus); (3) the cession of some land in the extreme north, on the Rybachi Rybachiy Peninsula; (4) the demilitarization of the Soviet-Finnish frontier; and (5) a 30-year lease on the port of Hangö (Hanko) and adjacent land, for the establishment of a Soviet naval base. In return, the USSR offered to give Finland 2,134 square miles of Soviet territory on the east-central frontier (Karelia).

Finland was prepared to yield to most of the Soviet demands, but firmly refused, as incompatible with her neutrality, to lease or sell the port of Hangö. This refusal resulted in the termination of negotiations. At the end of November the Soviet Union launched the "Winter War" of 1939-40 by invading Finland's eastern frontiers.

After 105 days of fighting, superiority in manpower and materials enabled the USSR to defeat the Finns, who signed a treaty of peace in Moscow on 12 March 1940.

The terms of the treaty were far more exacting than the original demands of the Soviet Union. Finland was forced to cede about 10 percent of its territory, including (1) the entire Karelian Isthmus. including Viipuri / Vyborg and the islands in the bay; (2) territory to the north and west of Lake Ladoga; (3) a number of islands in the Gulf of Finland; (4) a sizable triangle of land to the northeast, in the Salla region; and (5) part of the Rybachi Peninsula. 16/ At the same time the Soviet Union obtained a 30-year lease on Hangö Peninsula (and some adjacent land and water) for conversion into a Soviet naval base. Article 5 of the Treaty of Moscow confirmed the transfer of the Petsamo District to Finland (Treaty of Dorpat, 1920) and provided for the withdrawal of Soviet troops from the area to permit free transit of persons, goods, and air traffic. The treaty also provided for the creation of a Mixed Boundary Commission for the purpose of establishing a more detailed delineation of the boundary line. The protocol delimiting the new frontier between Finland and the USSR was signed by the representatives of the two nations on 29 April 1940. 17/

When the Germans invaded the USSR on 22 June 1941, they were joined by the Finns. This military venture turned out disastrously for Finland. Hostilities ended on 4 September 1944, and on 19 September an armistice was signed in Moscow between Finland on one hand and the USSR and the United Kingdom on the other (the latter acting on behalf of the Allied Powers at war with Germany and Finland). Under the terms of the armistice, the Soviet-Finnish borders of 1940 were restored, and Finland agreed to return the Petsamo area to the USSR. According to the wording of the armistice, this territory had been "voluntarily ceded to Finland by the Soviet State in accordance with the Peace Treaties of 14 October 1920 and 12 March 1940." 18/ The relinquishment of Petsamo was later confirmed by the Treaty of Peace of 10 February 1947, 19/* which, after ratification, went into effect on 18 September 1947. In addition, Finland granted the USSR a 50-year lease on the Porkkala Peninsula as a naval base. In the 1947 Treaty of Peace the Soviet Union confirmed the renunciation of its right to the lease of the Peninsula of Hango.

^{*}The Treaty of Peace was signed by Finland and all the Allied and Associated Powers except the United States, which had not declared war on Finland.

The new boundary between Finland and the USSR was surveyed and marked by a Mixed Soviet-Finnish Commission in the summer of 1945 (see accompanying map 12927). The demarcation documents were signed on 26 October 1945 and confirmed by an exchange of notes on 19 February 1946. The terminus of the new boundary was the cairn on Krokfjell Mountain, which became the trijunction of the frontiers of Norway, Finland, and the Soviet Union.

Under the terms of the German Assets Agreement of 3 February 1947 between Finland and the USSR (ratified 18 April 1947), the Yaniskoski-Niskakoski area in northern Finland was ceded to the Soviet Union. The Finns agreed, as part of their reparations, to reconstruct the dams and hydroelectric station at Yaniskoski which served as the main source of power for the Petsamo nickel mines. As a result of this cession of territory, a new demarcation of the northernmost boundary (just south of Krokfjell) was undertaken in the summer of 1947, and a new boundary protocol was signed on 7 December 1947. 20/

On 19 June 1948 a Finnish-Soviet agreement for the settlement of border disputes and incidents was signed at Moscow. The protocol applied not only to the frontier between Finland and the USSR but also to the border between Finland and Porkkala-Udd. The document was concerned mainly with border markings, boundary-crossing procedure, and customs formalities affecting hunting, forestry, and mining. 21, 22/ Six months later, on 9 December 1948, another agreement between the Governments of Finland and the USSR was signed concerning measures necessary to maintain a proper regime on the border between the two countries. On 22 April 1949 an "in force" order implemented this agreement.

B. Linear Description of the Boundary*

The border between Finland and the USSR starts in the south on the east side of Virolahti Bay off the Gulf of Finland and runs in

^{*}This boundary description covers areas of different widths for different sectors of the boundary; for the 1940 boundary, the area is approximately 1 kilometer (about 0.6 mile) wide; for the olddomain (pre-1940) boundary, it is approximately 0.5 kilometer (0.3 mile) wide. Along the 1940 boundary, the markers are numbered, from south to north, with a Roman numeral indicating the sector and an Arabic numeral the marker -- for example, No. I/1; for markers along the old-domain boundary, an Arabic numeral is used alone, as No. 857; and for those along the 1947 Yaniskoski-Niskakoski boundary, the designation includes a letter, as A/44.

a northeasterly direction, bisecting Karelia, to Iake Virmajärvi in Ilomantsi, the easternmost point in Finland.* From the lake the border follows an irregular course, generally south-north in direction, seldom paralleling a divide or water course, to the Patsjoki (Paatsjoki) River. At the Patsjoki it turns eastward for about 20 kilometers (approximately 12 miles) and ends at Krokfjell Mountain, the tri-state junction point. The length of the border is about 1,269 kilometers (approximately 788 miles), of which all but some 200 kilometers (124 miles) is over land.

For purposes of this study the Finnish-Soviet boundary has been divided into the following eight sectors:

- 1. The Southeast sector, from the shore of the Gulf of Finland (Rautalanlahti Bay), boundary marker No. I/1, to Iake Immalanjärvi, boundary marker No. II/1 (the 1940 border), a distance of 108.8 kilometers (67.6 miles), of which 11.3 kilometers (approximately 7 miles) are over water (lake and river) and 97.5 kilometers (about 61 miles) over land.
- 2. From Lake Immalanjärvi, marker No. II/1, to Lake Kangasjärvi, marker No. III/1, a length of 116.8 kilometers (about 72.5 miles), of which 39.2 kilometers (about 24 miles) are over water (lake and river) and 77.6 kilometers (about 48 miles) are over land.
- 3. From Lake Kangasjärvi, marker No. III/1, to Lake Virmajärvi, marker No. III/277/577 (No. 577), a length of 139 kilometers (about 86 miles), of which 34.4 kilometers (about 21 miles) are over water (lake and river) and 104.6 kilometers (about 65 miles) are over land.
- 4. From marker No. 577 to marker No. 775 on the old state boundary between the USSR and Finland (the central sector of the pre-1940 border), a length of approximately 468 kilometers (about 291 miles).
- 5. From marker No. 775 (IV/1) to the Kuolajärvi-Kelloselka road (the Salla sector), marker No. V/1, a distance of 149.4 kilometers (about 93 miles), of which 20.2 kilometers (12.5 miles) are over water (lake and river) and 129.2 kilometers (about 80 miles) over land.

^{*}In Finnish, "lahti" means bay; "järvi," lake; "vaara," mountain or hill; and "joki," river. In the translation of the protocols, as in this report, the English term is in many cases added to the name. Place names in the Finnish section follow the spellings on the two 1:250,000 AMS series, M515, Finland-Scandinavia 1:250,000, and N501, Eastern Europe 1:250,000; alternate names are given in parentheses and Russian forms in brackets.

- 6. From the Kuolajärvi-Kelloselka road (boundary marker No. V/1) to Mount Puitsitunturi in the Salla commune (boundary marker No. 857), roughly about 103 kilometers (64 miles).
- 7. The old-domain boundary (upper sector) from Puitsitunturi (marker No. 857) to Korvatunturi Mountain (marker No. 859), approximately 73 kilometers (about 45 miles).
- 8. The northernmost sector from Korvatunturi Mountain to Krokfjell Mountain, the trijunction of the frontiers of Finland, Norway, and the USSR, roughly 155 kilometers (about 96 miles).

Sector No. 1, Gulf of Finland to Lake Immalanjärvi:

From boundary marker No. I/1, situated on the northern shore of Rautalanlahti Bay (Vyborg; NP 35, 36-14: 54-671),* the boundary extends in a general northeasterly direction in a straight line to boundary marker No. 1/4, located in a forest or woodland 200 meters (656 feet) west of Signaalivuori /Signal'naya Mountain, leaving Simola Farmstead (NP 35, 36-14: 54-671) on the Soviet side. The boundary turns to an east-northeasterly course and continues in a straight line to boundary marker No. I/ll, located in the middle of Koskelanjoki River. In this sector the border passes through an area of sparse mixed woodland, crossing Lake Kiiskijärvi between markers Nos. I/7 and I/8. It then takes a general northerly course along the middle of Koskelanjoki River to marker No. I/14, located on ar island at the confluence of Oiskelanjoki River and a nameless stream, leaving the villages of Koskela and Reinikkala Reynikkala (NP 35, 36-14: 54-671) on the USSR side and the village of Kurkela on the Finnish side. At marker No. I/14 the boundary turns to the northeast and runs along the middle of a nameless stream to boundary marker No. I/17, located 250 meters (820 feet) northeast of a bridge across the stream on the Reinikkala-Vaalimaa road** (NP 35, 36-14: 54-671). From here the boundary goes in a northeasterly direction in a straight

^{*}Locational indices in the section on the Finnish border refer to sheets of AMS Series M515 and N501. For explanation of the key, see footnote, p. 8. The indices do not apply to ozalid sheets of these series, however.

^{**}Many of the "roads" referred to in this description are shown as tracks or trails (paths) on the AMS 1:250,000 series.

line for about 2.5 kilometers (approximately 1.5 miles) to marker No. I/20, located on the Viipuri-Hamina highway (NP 35, 36-14: 54-671). In this area of sparse coniferous and deciduous trees the border intersects two paths (at markers Nos. I/18 and I/19) and passes through some swampland* south of marker No. I/20. Continuing in a northeasterly course in a straight line for approximately 8 kilometers (about 5 miles) to marker No. I/30, the boundary traverses a mixed woodland area and some brush or shrub land, crossing numerous roads or tracks. It crosses the Urpalanjoki River at marker No. I/22 and intersects the Näppi-Murikala (Muurikkala) country road at marker No. I/27. In this sector the villages of Mäkelä /Myakelya/ (NP 35, 36-14: 55-672), Laisniemi, and Näppi are situated on the Soviet side of the border and Laisniemi Farmstead is on the Finnish side.

From marker No. I/30 the boundary follows a straight line in a northeasterly direction to marker No. I/32, a point 520 meters (1,706 feet) northeast of the eastern shore of Lake Salajärvi** on the Finnish side. The village of Salajärvi /Salayarvi / (NP 35, 36-14: 55-672) is on the USSR side. The boundary then turns in a southeasterly direction to marker No. I/33, located 135 meters (443) feet) southeast of the point of divergence of the Salajärvi-Nurmela-Väkevälä roads (NP 35, 36-14: 55-672). From marker No. I/33 the boundary again follows a northeasterly course to marker No. I/35, then turns in a northwesterly direction to marker No. I/36 before continuing in a general northeasterly direction. Maintaining the same course for approximately 4 kilometers (about 2.5 miles) to marker No. I/45, situated on the right shore of Santajoki River (brook), the boundary traverses an area of mixed woods and swamps, crossing Lake Hallilampi between markers Nos. I/40 and I/41 and the Säkkijärvi-Pulsa highway at marker No. I/43, as well as a few dirt, field, and forest roads. From the Santajoki the boundary continues in a northeasterly direction along a straight line to marker No. I/49, located 42 meters (about 138 feet) southeast of the point where a nameless brook flows into Lake Luotosenjärvi on the Finnish side. The border then extends

^{*}The distinction between swamp and marsh areas is difficult to ascertain in each specific case. The two terms are often used interchangeably in this boundary description.

^{**}There are many discrepancies with regard to lakes between the AMS 1:250,000 series and the Mixed Boundary Commission maps (see Maps of the Boundary, p. 58).

along a number of other lakes -- Valkjärvi (southeastern shore), Pukallusjärvi (Pukalusjärvi) /Ozero Pukatus-Yarvi/ (NP 35, 36-14: 56-673), Kirvesjärvi, and Lappjärvi (Lapjärvi) -- to marker No. I/66, located on the northwestern shore of the last-named lake, leaving Vanhatimperi /Vankhatimperi/ Farmstead (NP 35, 36-14: 56-673) on the Soviet side.

After making a turn at marker No. I/66 the boundary continues in an east-northeasterly direction across Lake Lasilampi, completing an inverted V-shaped bend at marker No. 1/72. From here the boundary makes a V-shaped turn and resumes a northeasterly course to Tervajoki River (marker No. I/79), intersecting the Häsälä-Hyttilä road (track) at marker No. I/76. North of this point (marker No. I/80) the boundary crosses the Häsälä-Villala road (NP 35, 36-14: 56-674). In this sector the border passes through a predominantly swampy area. Following the same general course, the boundary crosses the Ukkojärvi River between markers Nos. I/84 and I/85, then continues in a northeasterly direction for a few more kilometers to marker No. 1/89, situated at the confluence of two unnamed streams southwest of Kaiko (Kaikko) /Kaykko village (NP 35, 36-14: 57-674). From marker No. I/89 the boundary turns to the north-northeast and follows a straight line through a region of mixed woods, intersecting a number of dirt roads and crossing Lake Telkjärvi (NP 35, 36-14: 57-674), to marker No. I/96, located in the middle of the Hounijoki River. At this point the boundary turns to a general southeasterly direction along the middle of the Hounijoki and goes downstream to marker No. I/98, 200 meters (656 feet) southwest of Rajasalmi village (on the Soviet side). It then turns again in a northeasterly direction and goes in a straight line to marker No. I/100. At marker No. I/99 the boundary crosses the single-track, 5-foot-gauge Viipuri-Kouvola railroad (NP 35, 36-14: 57-674). The railroad station at Vainikkala on the Finnish side is used regularly for traffic across the border (Figures 10 and 11). Continuing in the same direction through an area of sparse woods and swamps, the boundary maintains a straight line until it crosses the Ykspäänjoki River between markers Nos. I/108 and I/112, where it bends to the southeast, the northeast, and then north. (This curve appears as only a slight bend on the 1:250,000 series.) North of the river the border resumes a northeasterly course, intersects the Lautala-Haapajärvi dirt road or track (NP 35, 36-14: 57-675), and continues in a straight line to the Viipuri-Lappeenranta highway (NP 35, 36-14: 57-675), which it crosses between Nos. I/123 and I/124. At the latter marker, it turns slightly to the southeast, then at marker No. I/125 assumes an east-northeasterly course, which it follows to marker No. I/129.

From marker No. I/129 the boundary bends to the north then the northeast to marker No. I/133, then follows a general northeasterly

course to marker No. I/146, situated on the left bank of the Saimaa Canal /Kanal Saymaan Kanava (NP 35, 36-14: 58-675), 12.4 meters (40.68 feet) from the shore. From here the boundary goes in a southeasterly direction to marker No. I/147, where it turns toward the east, intersecting the Kokkila (Kokinkylä)-Viipuri road at marker No. I/150 (NP 35, 36-14: 58-676). Taking an eastsoutheasterly course, the boundary extends to marker No. I/152, located on the left shore of the Saimaa Canal where it enters Lake Nuijamaajärvi Tozero Nuiyama-Yarvi (NP 35, 36-14: 58-676). Markers Nos. I/153 and I/154 are located on small islands in the lake, with the boundary line running to the north of the Soviet islands of Herrasaari and Vuohisaari. At marker No. I/155 the boundary goes overland in a northeasterly direction to the northwestern shore of a small lake, Laihalampi (marker No. I/158), and then in a southeasterly direction to the north shore of Lake Pankajärvi (Pankkajarvi), leaving both lakes on the USSR side. The Pohjola Farm is located on the Finnish side to the north of this area.

From Lake Pankajärvi (marker No. I/162) the boundary follows a general north-northeasterly course for approximately 8 kilometers (about 5 miles) to marker No. I/179. In this sector are some swampy terrain, stands of both coniferous and deciduous trees, and patches of brush. Boundary marker No. I/170 is located on the Kontu-Askola road 200 meters (about 656 feet) west of the fork of the Kontu-Näveri $\sqrt{\text{Nyaveri7}}$ -Askola roads (NP 35, 36-14: 59-676), leaving a group of homesteads south of Kontu (on the Soviet side). Continuing in a northeasterly direction from marker No. I/179, the border intersects the Viipuri-Joutseno road at marker No. I/180 and crosses Lake Suokumanjärvi (Suokumaanjärvi) between markers Nos. I/181 and I/182, leaving some of the Penttilä /Penttilya/ Homesteads on the Soviet side (Mikkeli; NP 35, 36-10: 59-676) and some on the Finnish side. From marker No. I/181 the boundary follows a northerly course to No. I/186, situated on the southwestern shore of the small lake, Valkealampi, before taking a northeasterly direction to marker No. I/202. In this area of woodland and brush, the border crosses the Viipuri-Imatra highway (NP 35, 36-10: 59-677) at marker No. I/193 and two small rivers or brooks, the Melikonjoki and Holmanjoki. Farmsteads in the vicinity of Kuurmanpohja /Kurmanpokh'ya/ are on the USSR side. A forest lane (clearing or firebreak) intersects the border between markers Nos. I/198 and I/199.

From marker No. I/202 the boundary curves slightly then goes in a north-northeasterly direction for approximately 3.5 kilometers (about 2 miles) to marker No. I/216 (on the 1:250,000 series this section of the border approximates a straight line running north). The boundary crosses the Vuoksi River between markers Nos. I/215 and I/216, the latter located on the left shore of the Vuoksi River,

39 meters (128 feet) northeast of the shoreline and 360 meters (1,181 feet) west of the westernmost house of a country estate. Raikkölä Ryaykkelya Village (South) is on the Soviet side (NP 35, 36-10: 59-677) and Räikkölä Village (North) on the Finnish side. Numerous tracks and ditches cross the border in this sector, as well as the Viipuri-Meltola highway (shown as a dirt road on the 1:250,000 series). Continuing in a northeasterly direction, the boundary intersects the Antrea-Imatra railroad at marker No. I/218 and the Jääski (Jääske)-Imatra highway at marker No. I/219 (NP 35, 36-10: 59-677). Both the railroad and road are shown on the 1:250,000 series, but the northern terminus of the railroad is placed to the east of Imatra (Figures 12 and 13). In this sector what appear to be telephone and telegraph lines parallel the forest lanes that cross the border south of marker No. 1/222. From this point the boundary follows a straight line in a northeasterly direction to marker No. I/225, then turns north-northeast to No. I/228, located 410 meters (1,345 feet) northeast of the fork formed by the Jääski-Hirslampi /Khirslampi/ road (NP 35, 36-10: 60-678) and a country road going west. Taking a northeasterly course to marker No. I/231, situated 90 meters (295 feet) north of the Jääski-Hirslampi road and 480 meters (1,574.8 feet) southwest of an isolated homestead on an elevation in Finnish territory, the boundary turns in an easterly direction to marker No. I/234, located 660 meters (2,165 feet) southwest of a peat barn on the Jääski-Hirslampi road. In this sector the boundary appears as an inverted bowl on the AMS 1:250,000 map series.

From marker No. I/234 the boundary takes a northeasterly course to marker No. I/235, located on the southern tip of the Karhusuo peat bog, then continues in the same general direction (with some angular turns) to marker No. I/242. The boundary from marker No. I/225 through No. I/242 closely parallels the Jääski-Hirslampi road, which is on the USSR side. Only a portion of this road appears on the 1:250,000 map series, which shows the boundary in this area as a shallow bowl-shaped bend. From marker No. I/242, the boundary continues in a northeasterly direction in a straight line to marker No. I/247, located 87 meters (285.4 feet) east of an isolated homestead on the Finnish side, leaving Laitila Village on the Soviet side (a Laytila Village is shown slightly to the south of this approximate location on the 1:250,000 series).

The boundary goes in a straight line from marker No. I/247 through No. I/255 to marker No. II/1, which is situated 200 meters (656 feet) north of the northern tip of the triangle formed by the roads in Hirslampi Village and 8 meters (26 feet) west of the Hirslampi-Niskala (Niskapietilä) road (NP 35, 36-10: 60-678). In this sector the border traverses a region of swamps and mixed vegetation, crosses numerous field roads, intersects two small unnamed

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lakes (between markers Nos. I/250 and I/251), and crosses the south-easternmost inlet of Lake Immalanjärvi.

Sector No. 2, Lake Immalanjärvi to Lake Kangasjärvi:

From marker No. II/1 the boundary continues in a northeasterly direction along a straight line to marker No. II/5, south of Iassila Village (NP 35, 36-10: 61-678) on the western shore of Rapolankorvenoja, 4 meters (13 feet) from the shoreline and 230 meters (754.5 feet) south of a small bridge. From here the boundary continues in the same course, intersecting the Hilisevanjoki River (between markers Nos. II/6 and II/7), to marker No. II/11, located 3 meters (9.8 feet) southwest of the Matikanlahti-Purnujärvi (Purnujärvi Estate). In this sector, a small lake, Leppälampi, is on the USSR side, and the area is one of swamps (with reeds), mixed forests, and country roads or paths. What appear to be powerlines cross the boundary between markers Nos. II/3 and II/4 and slightly north of No. II/5.

From marker No. II/11, the boundary continues in a northeasterly direction, except in the area of Suurissari Island on Lake Hiidenjärvi (NP 35, 36-10: 61-679), where the boundary makes a U-shaped bend around the south end of the island 50 meters (164 feet) from the shore, leaving the whole island on the Finnish side. The exact position of the boundary in this area is given by three posts with pointers to boundary marker No. II/15, located on the western shore of a small lake, Karsalampi. The border skirts the northern edge of this lake, leaving it on the Soviet side. From marker No. II/19 the boundary follows a winding but generally northeasterly course along the middle of an unnamed brook, which flows from the northeastern tip of Lake Karsalampi, to marker No. II/22, situated at the confluence of that brook with another brook flowing through Roiha Village. The boundary then extends in a straight line to marker No. II/23, located on a steep sand hillock south of Vilkko (Paavola) Village (NP 35, 36-10: 61-679), 59 meters (193.5 feet) from the brook. From this point the boundary takes a southeasterly direction to marker No. II/24, then resumes a northeasterly course to the Lankila-Miettilä road (marker No. II/25). It then parallels the Karajoki River (a Kuruy-Yoki River is shown on the 1:250,000 series) before veering in a north-northwesterly direction to marker No. II/27, located in a woods at the eastern end of a field belonging to Vilkko Village and 145 meters (475.7 feet) from a hay barn. The sector from marker No. II/23 to No. II/27 appears as a pronounced bend on the 1:250,000 series.

From marker No. II/27 the boundary makes a turn to a northeasterly course, which it follows to marker No. II/29, situated at the eastern limit of Varis Village, 6 meters (19.6 feet) south of the Ilmee

/Ilme/-Miettilä dirt road (NP 35, 36-10: 62-679) and 90 meters (295) feet) from a cow barn. Turning slightly to the north, the boundary goes about 6.5 kilometers (approximately 4 miles) to marker No. II/38, located at a brook flowing from the northwestern part of a small lake, Savolaisenmäenlampi, on the USSR side. Between markers Nos. II/35 and II/36 the boundary crosses Lake Pitkäjärvi /Ozero Pitkya-Yarvi/ (NP 35, 36-10: 62-680). From marker No. II/38, the boundary winds in a general northeasterly direction along the middle of an unnamed brook downstream to marker No. II/41, and then goes in a straight line in the same direction to the Ankilänsalo-Ankilä country road or track (marker No. II/47). In this sector the border crosses the Ilmee-Laikonkanka and the Pajari Payari -Ankila (Haaprinta-Jokela) roads at markers Nos. II/39 and II/44, respectively (no road connecting the latter two villages appears on the AMS 1:250,000 series). In part of this region the boundary traverses an area of swampland. Continuing in a northeasterly direction to marker No. II/49, located on the northeast shore of Kokkolanjoki (Kitolanjoki) /Kokkolan-Yoki/ River 6 meters (19.7 feet) from the shoreline, the boundary intersects what appears to be a winter road south of the river.

From marker No. II/49 the boundary continues in a straight northeasterly course to marker No. II/54, situated 51 meters (167 feet) from the Koitsansalo-Koitsanlahti flag-station road. Between markers Nos. II/51 and II/52 the boundary crosses the Koitsansalo-Simpele railroad, shown to the south of Simpele on the 1:250,000 series. Maintaining the same direction to marker No. II/59, which is 700 meters (2,296.5 feet) southwest of the Lamminkula /Tamminkyulya/flag station on the Poutala-Koitsanlahti all-weather road (NP 35, 36-10: 63-681), the boundary passes through an area of sparse mixed woodland.

From the Foutala-Koitsanlahti road, the boundary turns in a north-northwesterly direction and follows a straight line to a deflection point located on Kukkarolahti (Kukkavalampi) Inlet of Lake Simpelenjärvi between markers Nos. II/64 and II/65, where it makes practically a right-angle turn to the east. (Figures 14 and 15.) The turning point of the boundary, which forms the apex of the triangle shown on the 1:250,000 sheet is located 463.1 meters (about 1,519 feet) north of marker No. II/64. The passage of the boundary line along the Kukkarolahti Inlet is further indicated by a post with a pointer set up on the west shore of the inlet in line with the deflection point of the boundary and with boundary markers Nos. II/65 and II/67, as well as by a floating marker (anchored float) set up at the deflection point. From marker No. II/67 the boundary goes in a northeasterly direction by way of lake Pitkajärvi, then follows the middle of an unnamed brook flowing from

the northeastern tip of the lake to marker No. II/71, located in the middle of an unnamed brook at its confluence with a brook issuing from Kiimasuo Swamp.

At marker No. II/72 the boundary intersects the Syvaoro /Stantsiya Syuvyaoro/-Parikkala railroad (NP 35, 36-10: 63-682) before continuing in a northeasterly direction to marker No. II/76, situated on the south shore of the larger of the Sarvilammet Lakes 18 meters (59 feet) from the shoreline (shown as a shallow bowlshaped bend on the 1:250,000 series). The Syväoro-Parikkala road and the Siimesoja River are crossed by the boundary at markers Nos. II/73 and II/75, respectively. From marker No. II/77 the border extends for approximately 4 kilometers (about 2.5 miles) through a swampy area, intersecting two field roads, and continues in a straight line to marker No. II/82, located_7 meters (about 23 feet) northeast of the Sillanlahti Sillanlakhti7-Tiviä road (NP 35, 36-10: 64-682). From here the boundary turns slightly to the east and follows a northeasterly course by way of marker No. II/83 to a deflection point located on Lake Tyrjänjärvi, 102.5 meters (334.8 feet) southeast of a post with a pointer set up on a promontory projecting into Lake Tyrjänjärvi from the west, opposite Päivätsaari Island. From the deflection point the boundary proceeds in a slightly more northern direction across the middle of a small crag projecting above the water 140 meters (459 feet) southeast of the southern shore of Suusaari Island, to the center of boundary marker No. II/85, located 162.8 meters (534 feet) from the USSR post set up on the eastern shore of Lake Tyrjänjärvi and 171 meters (561 feet) from the Finnish post set up on the promontory on the southeastern shore of Suursaari Island. Continuing in a north-northeasterly direction through the lake to marker No. II/87, situated on the eastern shore of Suuri Naattiniemi Bol'shoy Naattiniemi Cape, the boundary goes overland through a pine forest to marker No. II/90, making a slight turn toward the east at marker No. II/88. A small lake, Haisuanlampi, is located to the east of marker No. II/88, in Soviet territory. The Tiviä-Saarenkylä road on the Finnish side parallels the border in this area.

The boundary crosses Lake Ylä-Tyrjänjärvi in a generally northeasterly direction to marker No. II/95, located in the middle of the Koskutjoki River as it enters the lake; it then follows the middle of the river upstream to marker No. II/99, situated in the river 770 meters (2,526 feet) above a bridge on the Parikka (Parikankylä)-Honkakylä road (NP 35, 36-10: 64-683). Continuing in a northeasterly direction, the boundary passes through a mixed forest area to marker No. II/102, located on the western shore of the northwestern inlet of Lake Kurkelanjärvi /Ozero Kurkelan-Yarvi/ (NP 35, 36-10: 65-684), ll meters (36 feet) northwest of a spring. At this point the boundary

turns in an easterly direction through Lake Kurkelanjärvi to a deflection point in the lake, then goes in a northerly direction to marker No. II/103 on the north shore of the lake, forming an angle that appears as a shallow V-shaped bend on the 1:250,000 series. Northeast of Lake Kurkelanjärvi the boundary follows an unnamed brook and crosses three small lakes -- Soikulanlampi, Munalampi, and Kaatiolampi -- to marker No. II/115, located on a cape projecting from the northwest and separating Nirkonlahti Inlet from Lake Korpijärvi /Ozero Korpi-Yarvi / (NP 35, 36-10: 65-684). In this sector of approximately 6 kilometers (about 3.7 miles), the border passes through a region of deciduous forest, some stands of pine, a loggedover area (at marker II/111), and some swampland and is crossed by forest roads. It continues in a northeasterly direction by way of Lake Korpijärvi, leaving Suursaari Island on the Finnish side, to marker No. II/119, on the western shore of Suojärvi. In this area the border crosses two minor roads. Continuing in the same direction, the boundary crosses Lake Suojärvi between markers Nos. II/119 and II/120 and passes through the Suurisuo Swamp to marker No. II/123, situated on Kuivaniemi Cape on the south shore of Lake Pyhäjärvi Ozero Tyukhya-Yarvi (Sortavala; NP 35, 36-11: 34-685). The boundary continues in a general northeasterly direction, making a slight bend in the middle of a strait between Suitsansaari Island and Salmenniemi Cape (NP 35, 36-11: 34-685), then in a northeasterly direction along a straight line through Take Pyhäjärvi to boundary marker No. II/128 at the north shore. It continues overland in a straight line to marker No. II/133, then turns to the north to marker No. II/135, located on the shore of a cape abutting into Lake Vaitjärvi (NP 35, 36-11: 35-686), passing through marshland and deciduous and coniferous forests. Making a V-shaped turn, the boundary crosses Lake Vaitjärvi in an easterly direction, then at marker No. II/137 turns northeast to marker No. II/140, situated 9 meters (29.5 feet) southwest of the Närsäkkälä-Kumuri road. In this sector the border crosses the Rajajoki River at marker No. II/138. The boundary follows a straight line in a northeasterly direction to the edge of Ruohosuo Swamp, continuing to within 5 meters (16.4 feet) west of the Lahdenkylä-Ristiselkä road, then, making turns at markers Nos. II/143 and II/145, to marker No. III/1 on the southwestern shore of Lake Kangasjärvi /Ozero Kangas-Yarvi/ (NP 35, 36-11: 36-687). Although these segments of the boundary are straight lines, the section appears as a cup-shaped bend on the 1:250,000 series.

Sector No. 3, Lake Kangasjärvi to Lake Virmajärvi:

From marker No. III/1, the boundary goes along the western part of Lake Kangasjärvi, then bends in a northeasterly direction along the middle of the Kiteenjoki River upstream to boundary marker No. III/11. In this sector, at marker No. III/5, the boundary crosses

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a wooden bridge across the river on the Kangaskylä-Säyneenkylä road. From marker No. III/11 to No. III/24, located on an elevation 124 meters (406.8 feet) northeast of the intersection of the Matkaselkä-Kitee and Havukkamäki-Björnintalo roads, the border passes through predominantly swampy land and mixed forests, leaving Turtiala Homestead (Vyartsilya; NP 35, 36-7: s.w. corner) on the Finnish side. The boundary continues in a northeasterly direction to_marker No. III/49 on the southwestern shore of Lake Rämeenjärvi /Ozero Ryamen-Yarvi, 370 meters (1,214 feet) northeast of Kosonen Homestead. In this area of mixed woods and swamps, the boundary crosses a small lake, Matkalampi (marker No. III/29), and is intersected by the Katihtalammenpuro Brook (No. III/37). Maintaining the same course from Lake Rämeenjärvi the boundary crosses the Pälkjärvi-Peijonniemi road northwest of the Hakulinen Homestead (marker No. III/53) and continues through swampland to marker No. III/67, at which point it crosses the Värtsilä /Vyartsilya/-Kaurila road and railroad (NP 35, 36-7) (Figure 16). From marker No. III/68 the boundary bends along the middle of the Jänisjoki River, east of Thurula (Turala), and continues upstream to the confluence of the Juvanjoki and Jänisjoki (marker No. III/73), leaving the Värtisilää /Vyartsilya Homestead on the USSR side and Uusikylää Homestead on the Finnish side. East of Lake Sääperijärvi, the boundary line turns east at marker No. III/78 and passes through Lake Ryösiöjärvi at marker No. III/83, resuming a true northeasterly course at marker No. III/88, located 320 meters (1,050 feet) west of the exit of a field road onto the Värtsilä-Saarivaara road. From this point the border extends in a straight line to marker No. III/98, located in a wood 85 meters (279 feet) west of the intersection of the boundary by the Värtsilä-Kenraalinkylä road, leaving Miikkulampi (a small lake) on the USSR side and Kalliola Homestead on the Finnish side; a settlement of the latter name also appears on the USSR side (NP 35, 36-7), east of marker No. III/103. The border then passes through a group of lakes, including Jouhtenusjärvi, Kaustajärvi, and Kukkolampi, to marker No. III/113. silä-Saarivaara road parallels this entire sector on the Soviet side to marker No. III/110, where it crosses the line in following the shore of Lake Kukkolampi. The boundary continues in a northeasterly direction to marker No. III/117, located in a wooded area 795 meters (nearly half a mile) southeast of a bridge across the Särkilampi-puro Brook, which is on the Värtsilä-Onnenvirra road (Finnish side). After making a slight bend at this point, the boundary extends in a straight line across the southwestern inlet of Lake Kahäjärvi (Kanajärvi) to marker No. III/126, and then on to No. III/138, 77 meters (252.6 feet) northeast of the intersection of the boundary by_the Tsiipakka-Hoilola road on the southwest shore of Lake Korpijärvi /Ozero Korpi-Yarvi/ (NP 35, 36-7). In this sector the boundary runs through lakes, swamps, and sparse woods. The boundary turns eastward at marker No. III/139 and then northeast at No. III/141, passes through the western

part of Lake Korpijärvi to marker No. III/143, then follows the middle of the Tsiikonjoki River upstream in a general northwesterly direction to boundary marker No. III/146. From this point the border resumes a northeasterly direction to marker No. III/153, located on the Korpiselkä-Öllölä road. Slightly to the south of this area the Korpiselkä (Korpisel'kya)-Onnenvirra road is intersected.

From marker No. III/153, the boundary goes through a region of lakes, brooks, swampland, and sparse woods in a straight northeasterly direction to marker No. III/175, where it crosses the Karali-Savinola (Mutalahti) road (NP 35, 36-7). It then continues to marker No. III/178, located 18 meters (59 feet) southwest of the intersection of the boundary and the southwestern shore of Lake Viiksinselkä /Ozero Viksin Sel'kya/. From this point the boundary turns slightly to the east, then sharply in a northerly direction across the lake to marker No. III/185, where it takes an easterly course to the edge of a forest (boundary marker No. III/186) 20 meters (65.6 feet) east of the intersection of the boundary by the eastern shore of Lake Melaselkä /Ozero Melasel'kya/. From Lake Melaselkä the boundary runs in a general northeasterly direction in a straight line, passing through Lake Lutonlampi (Nietalahti) from marker No. III/189 and continuing to No. III/200, located on an elevation 296 meters (971 feet) southeast of Lamanaho (Lammenakho) Homestead. In this sector the border intersects the Peurujoki and Piisteenjoki Rivers, and crosses a trail north of each. On the 1:250,000 series, a Peuruioki Farm (NP 35, 36-7) is shown to the east (the Soviet side) of this sector.

The boundary continues in a northeasterly direction along a straight line from boundary marker No. III/200 to marker No. III/215, located on the left bank of Koitajoki River northeast of Vihurinsuontorppa Homestead which is on the Finnish side. In this area the border traverses mainly swamp, bog, and sparse woods. From No. III/215 the boundary twists and bends along the middle of the Koitajoki River to its outlet into Lake Piijärvi (No. III/225). The boundary follows an unnamed stream that connects Lake Piijärvi with Lake Konnukka (Mustikaisenlahti) to the northeast, whence it continues northeastward through that lake and the swampy and forested areas beyond to marker No. III/250, southwest of Ilajan-Ruukinpohja Homestead; it intersects the Huotarinvaara (Kuolismaah)-Möhkö road at marker No. III/239. From marker No. III/250 the boundary makes a V-shaped bend_between Lakes Ilajanjärvi on the Finnish side and Luovenjärvi /Louven-Yarvi on the Soviet side (NP 35, 36-7) and then continues from marker No. III/257 in a straight northeasterly line to marker No. III/264, located in the forest 56 meters (183.7 feet) northwest of the mouth of Papinpuro Brook. What appears to be a track or a dirt road between Niemijärvi and Longonvaara crosses the

boundary at marker No. III/265 (on the 1:250,000 series a Longonvara Farm is shown on the USSR side). From here the border extends in a northeasterly direction to marker No. III/271, situated on a promontory formed by the Koitajoki River and Luokkipudas Inlet. It then continues in a straight line northeastward to marker No. III/277/577, located on an unnamed island in the northwestern part of lake Virmajärvi / Ozero Tel'ma-Yarvi / (NP 35, 36-7). In this sector the boundary crosses Kalatonlampi Pond and Pissipuro Brook. Parelleling the border on the Finnish side between markers Nos. III/259 and III/275 is a forest lane. On the Soviet side two such clearings occur near the boundary, but not parallel to it, north of Pissipuro Brook. At some places on the Finnish side also there may be more than one clearing.

Sector No. 4, Lake Virmajärvi to Marker No. 775:

From boundary marker No. III/277/577, the boundary goes along. the old Soviet-Finnish line in a northwesterly direction to marker No. 578. (The central sector of the old-domain border is between boundary markers Nos. III/277/577 and 775.) At marker No. 578 the boundary continues through Lake Virmajärvi and follows the twists of an unnamed river that flows generally northwest, entering Lake Kivijärvi at marker No. 580. The border then passes through a swampy area of sparse woods, crossing the Asumajoki River north of marker No. 582. The boundary continues in the same northwesterly direction to marker No. 584, at which point it veers sharply to the west. At the Vaskijoki River (marker No. 585) it turns again to a northeasterly course (Lendery; NP 35, 36-3: 42-63°00'). (On the 1:250,000 series, a Vaska River is shown here on the Soviet side.) From marker No. 586 the border takes a northwesterly course to Lake Alinen Aittojärvi /Ozero Ayto-Yarvi/ (NP 35, 36-3: 42-699), where it turns sharply west for a short distance before resuming a northwesterly direction along the Rajapuro Brook. The boundary then traverses a swampy region as far as marker No. 594, from which it passes through Lake Palojärvi Ozero Palo-Yarvi (NP 35, 36-3: 41-699). From the lake the boundary goes in a northwesterly direction to Lake Kartitsanjärvi /Ozero Kartsya-Yarvi/ (NP 35, 36-3: 41-700), which it crosses between markers Nos. 598 and 599. A Kartitsa Farm is shown on the Finnish side on the 1:250,000 series. Continuing the same course, the boundary reaches a small lake, Jerkosenlampi, at marker No. 602, continues to marker No. 605, and then extends along the middle of the Haapajoki /Khapa-Yoki / River to Lake Ylinen Haapajarvi (marker No. 611). In this area the border passes through predominantly swampy land, coniferous forests, and some burned woods.

From Lake Ylinen Haapajärvi the boundary goes in a northwesterly direction to marker No. 617, then swings to the west, crossing a country dirt road at marker No. 618 (NP 35, 36-3: 40-702). At marker

No. 619 it curves through a small lake, Korpilampi, then makes another bend before continuing a northwesterly_course to marker No. 624. then follows the Ruokooja /Ruokko-Ioki Stream (ditch) (NP 35, 36-3: 39-702), crossing the Lieksanjoki (Lenderka) River between markers Nos. 628 and 629. The border then continues in a northwesterly direction, intersecting a road or track before reaching Lake Kokkojärvi /Ozero Kokko-Yarvi/ (NP 35, 36-3: 38-703) at marker No. 630. The border continues in the same general direction beyond Lake Kokkojärvi (marker No. 632), passing through basically swampy terrain interspersed with conifers (probably pine) until it crosses a prominent hill, Aittovaara, approximately 300 feet high (marker No. 635). Southwest of this point, on the Finnish side, lies Aittovaara Farm. Just north of Aittovaara Hill, the border intersects the Tuulijoki Tula River (NP 35, 36-3: 37-703) at marker No. 636. Thence the boundary follows a similar course to the Saarijärvenjoki River before crossing the eastern part of Lake Saarijärvi (NP 35, 36-3: 36-705). From Lake Saarijärvi the border goes in a northwesterly direction, crossing the western section of Lake Pyörälampi /Ozero Pyuri-Yarvi (NP 35, 36-3: 36-705) from marker No. 645. Northwest of this point the border crosses a dirt road (Lieksä-Repola) and then extends along the middle of Lake Pitka Valamojarvi from marker No. 649 to No. 650 (Pirtti-Valamanjärvi and Saari-Valaman-järvi appear to the southwest and west of the line, respectively) (NP 35, 36-3: 30°00'-706). From No. 650 the boundary goes to marker No. 655 on the western shore of Lake Otrosjärvi (Nurmes; NP 35, 36-2: 64-707), where the border comes to a point. A noticeable feature of this entire sector of the boundary (Lendery; NP 35, 36-3) is the scarcity of roads of any kind. The whole area is dominated by swamps, small lakes, and coniferous forests.

At lake Otrosjarvi, the border turns sharply to the northeast, passing Jokivaara, Möntövaara, and Märkävaara Hills before reaching marker No. 660. From No. 660 the boundary traverses another section of swampy and forested terrain, trending in a northeasterly direction to marker No. 663, north of Kuusijärvi (a Lake Kuusijärvi is to the west on the Finnish side) (NP 35, 36-3: 36-708), at which point a road or trail intersects the boundary. Continuing to bear in a northeasterly direction, the boundary crosses a small lake (Verkkolampi), a river (Rokojoki), and a prominent hill (Pihlajavaara) to marker No. 669 on the northern edge of a small lake (Särkilampi). This boundary sector is in a remote, basically uninhabited, swampy region characterized by boggy lowlands. The border follows the same general course until it reaches a small lake, Honkalampi (marker No. 671), where it turns once again in a northwesterly direction (Lake Vonganjärvi appears to the southwest of the boundary) (Kimasozero; NQ 35, 36-15: 37-711). The boundary then crosses the eastern part of Lake Kaitakiekki (NQ 35, 36-15: 37-711) at marker No. 672 and pursues the same course to marker No. 673 (Hutunsilmälampi), where it turns sharply northeastward. At marker

No. 674 the boundary veers northwestward again, crossing a small lake, Mahakaslampi, and at No. 675 turns further toward the west, paralleling the Mahakasjoki River as far as marker No. 676. From this point the border turns more to the northwest, then at marker No. 677 almost due north. It traverses the western sections of two small lakes (Rühilampi and Särkilampi), then makes another V-shaped bend northwestward at marker No. 678, intersecting Lake Hoikkajarvi and the Hoikanjoki River, and crosses a trail along the eastern end of Lake Maanselänjärvi (NQ 35, 36-15: 36-713). In this sector the boundary passes through an area of bogs and a swamp and lake region interspersed with some coniferous forests. Continuing in an irregular northwesterly direction, the boundary passes Lake Mantyjärvi (NQ 35, 36-15: 36-713). Between markers Nos. 684 and 686 the boundary follows a northwesterly course that approximates a straight line for a distance of about 5 kilometers (3 miles), crossing Lake Koivajajärvi. Koivaja Cabin appears to the west of this point (NQ 35, 36-15: 30°00'-714).

North of Lake Koivajajärvi, at marker No. 686 the border again turns to the north-northeast, makes a series of V-shaped bends at markers Nos. 687, 688, and 689, and passes through Lake Karankajarvi from marker No. 690. A Karanga River is shown on the Soviet side (NQ 35, 36-15: 30°00'-715). Trending slightly to the northwest from marker No. 689, the boundary makes another shallow V-shaped bend at marker No. 691, crosses a trail, and continues through swampy land and coniferous forests. Bending slightly at each marker but maintaining a generally northerly course to marker No. 697, the boundary intersects another path between markers Nos. 694 and 695. At marker No. 697 (Sotkamo; NQ 35, 36-14: north of 64°30'), south of Hyvänmurronlampi, a small lake on the Finnish side, the boundary turns due northeast. In this sector the border passes Honkavaara Hill and Lakes Iso-Lahnajärvi and Pieni-Lahnajärvi. At marker No. 698 (near Tapionaho), the boundary turns farther to the east before crossing Lake Karsikkojärvi. The border intersects only one trail in this sector, but as elsewhere in the boundary area it crosses many brooks and streams. East of the Karsikkopuro Brook (marker No. 699) the border turns slightly more northward to marker No. 700 and again to No. 701, situated in Lake Vuokkijärvi /Ozero Kamennoye/ (Kimasozero; NQ 35, 36-15: 36-717), where it veers northwest to Lake Kivijärvi (NQ 35, 36-15: $30^{\circ}00^{\circ}-717$). At marker No. 707 (Kontiovaara Hill), the line again turns in a northeasterly direction and at marker No. 709 reverts to a northwesterly course, intersecting Lake Viianginjärvi (Pien-Viiankijärvi) (NQ 35, 36-15: 36-718). It then turns due west at a point south of Ala-Törsämöjärvi (No. 711) The boundary then takes a westerly course, passing over a slightly raised area, or platform, between markers Nos. 713 and 716, for about 16 kilometers (approximately 9.9 miles). In this section the boundary skirts the northern part of Lake Korpijärvi (Sotkamo; NQ 35, 36-14:

northeast corner), passing through predominantly swampy land and crossing a trail to the west of marker No. 715. At Kangasaho (marker No. 717) the border turns in a northwesterly direction, intersecting a dirt road (Raatteese-Vaatanvaara) at marker No. 718 and continuing across the middle of Lake Raatejärvi (NQ 35, 36-14). At the northern end of the lake the boundary turns to the northeast to marker No. 721 (Saarenmannpää Point), then veers again to the northwest toward Syrjävaaranpuro Brook. This whole sector is swampy, with some coniferous woods.

From Syrjävaaranpuro Brook (marker No. 723) the boundary traces a shallow curve to marker No. 726, from which it continues in a northnorthwesterly course to Kivipuro Brook (No. 727) before turning to a generally northeasterly direction. In this area the border traverses a forested and swampy area, seemingly remote and isolated, intersecting a trail north of Ristikangas (marker No. 728). Continuing along the same generally northeastern course to Yppyransuo Swamp, the boundary turns more sharply to the northeast. Near Lavavaara Hill (No. 731), it turns due east and continues to the vicinity of Puukonvaara Hill (No. 732). In this area the border crosses the Raippajoki and Kirkkelänjoki Rivers and a path or trail. At Puukonvaara the boundary takes a general northeasterly direction to marker No. 734, where it crosses the Venetheitonjoki River. Veering sharply northwestward, the border forms a V before skirting around the eastern end of Lake Pirttijärvi (markers Nos. 735, 736, and 737), intersecting a trail north of the lake and continuing on to marker No. 738. At marker No. 738 (west of Hautasuonaho) the border turns abruptly in a northeasterly direction, crossing Lake Hoikkajärvi, which approximates the location of Ozero Levi on the Soviet side (Kuusamo; NQ 35, 36-10: southeast), and continues along the same course to marker No. 740 before turning slightly to the northwest. In this sector two small lakes are crossed, Aumalampi and Lomalampi. At marker No. 740 the boundary crosses the Martinjoki River in a northwesterly direction, continuing for a distance of 1.5 kilometers (about 0.9 mile) before turning gradually in a general westerly direction, beginning at marker No. 741. Between markers Nos. 741 and 748 the border intersects Haatajanoja Brook, goes through a district of small lakes, one of which is Särkkalampi, and crosses a dirt road (Juntusranta-Lonkka) and an unnamed river before turning in a northwesterly direction at Hallavaara Hill (No. 748). Between markers Nos. 748 and 749 a trail intersects the boundary. At marker No. 749 the border turns in a northeasterly direction and crosses Lake Kalmojärvi. From marker No. 750 (west of Olkivaara Hill), it follows a northeasterly course to No. 752. In this area of continuous marshes and swamps the boundary crosses two trails. At marker No. 752 (southeast of Ahvensuo Swamp) the border again turns in a north-northwesterly direction to marker No. 753,

northwest of Louhisuo Swamp. From here it takes a straight northerly direction for a distance of approximately 15 kilometers (about 9 miles) to marker No. 755, in the vicinity of Kalliovaara Hill. In this sector the border passes Vierivaara Hill and crosses Rytipuro Brook, Käyrähoki River, and two small lakes -- Joutsenpesälampi and Karhulampi. From marker No. 755 the boundary extends northeastward to marker No. 756, then continues in the same general direction to Sarvikivi (No. 757). From here to boundary marker No. 759 the border passes through an area of burned woods and coniferous forests. At marker No. 759 (east of Matovaaranpalo and just south of a trail intersecting the border), the boundary turns sharply in a northwesterly direction, continuing for approximately 8 kilometers (about 5 miles) through a remote area of predominantly swampy vegetation to marker No. 764. At the western edge of Lake Lattajajärvi (No. 765) the border turns due northeast, crossing Lake Lauttajärvi (Lauttajajärvi) (NQ 35,36-10) and the Kaartojoki River (which approximates the location of the Keto River on the Soviet side), and extends to Lake Parvajärvi (No. 768), a distance of about 15 kilometers (approximately 9 miles). From Lake Parvajärvi (No. 771) the boundary takes a southeasterly direction through a lake area to marker No. 774, at which point it turns to the north, making a sharp V, and extends to marker No. 775 (Ukhta; NQ 35, 36-11: 30°00'-728), the last in this section of the old state boundary between the USSR and Finland.

Sector No. 5, Marker No. 775, to the Kuolajärvi-Kelloselka Road:

From boundary marker No. 775, the boundary goes in a northerly direction in a straight line to boundary marker No. IV/11, located north of Lake Suurijärvi /Ozero Suuri-Yarvi/ (NQ 35, 36-11: 30°00'-729), crossing Lake Kinnusenjärvi, the eastern part of Lake Kovajärvi, Virmajoki River, and Lake Suurijärvi. Lakes Pajulampi and Palolampi are on the USSR side and Lake Peltojärvi on the Finnish side. From marker No. IV/11 the boundary goes in a north-northwesterly direction along a straight line to marker No. IV/16, located on Penninkiluomanvaara Hill, and continues in the same course to a crag south of Lake Penninkiluoma /Ozero Penninkiloma /. North of this point the border crosses a dirt road (NQ 35, 36-11: 30°00'-730) and then the lake. From marker No. IV/18 the boundary continues in a straight line, crossing the Pistojoki River, which runs out of Lake Multijärvi Ozero Multi-Yarvi/, and skirting the eastern end of Lake Kuurna at marker No. IV/24. Konttila Homestead is on the Soviet side near marker No. IV/18. From Lake Kuurna the course of the boundary continues north-northwesterly to the eastern end of Lake Laakiainen, intersecting the Pitkaperanjoki River north of marker No. IV/26 and leaving a small lake, Kaihlalampi, on the Finnish side between Nos. IV/28 and IV/29. This whole sector is marshy and swampy.

Continuing a northwesterly course to boundary marker No. IV/31, located on Mount Palovaara, the boundary extends to the southern shore of Lake Angerjärvi /Ozero Angar-Yarvi/ (NQ 35, 36-11: 30°00'-731). Crossing Lake Angerjärvi, the boundary traverses a swamp and bog region, intersecting the Munajoki River and a trail at a point south of marker No. IV/35. From here the boundary goes in a straight line northwest to marker No. IV/38, located 120 meters south of the western tip of Lake Huutolampi. On the Finnish side of the border in this sector there is some meadowland. At marker No. IV/38 the boundary bends in a northeasterly direction to marker No. IV/40, 10cated on a small islet in Lake Pukarinjärvi /Ozero Pukari-Yarvi/ (NQ 35, 36-11: 30°00'-731), at which point it turns back to a northwesterly direction, making a V-shaped bend. From here the border crosses the Kuusamo-Pukari Homestead road at marker No. IV/43, then extends in a northerly direction, intersecting a trail just south of marker No. IV/44. The boundary then continues in a straight line to marker No. IV/48, located on Cape Jyrkkaniemi on the southern shore of Lake Eksymäjärvi (Kuolayarvi; NQ 35, 36-6: southeast corner). In this area a trail or path crosses the border south of No. IV/47. The boundary bends around a cape in the western part of Lake Eksymäjärvi, forming a dipper, to marker No. IV/51, located on the north shore of Sarkilahti Inlet. To indicate the passage of the boundary line along Lake Eksymäjärvi, pointers have been set up on boundary-marker posts Nos. IV/48 and IV/51 showing the direction of the boundary line between Nos. IV/48 and IV/49 and Nos. IV/50 and IV/51.

From marker No. IV/51 the boundary takes a northwesterly course through swampy and boggy terrain with some scattered coniferous forests to marker No. IV/54, situated on the south shore of Lake Sarajärvi. In this sector a forest lane cuts diagonally across the border at marker No. IV/52. From marker No. IV/54 the boundary goes in a northeasterly direction to No. IV/55, located on a small islet north of the Strait of Hirvassalmi, leaving Kelkkasaari Island, on which a village is located, on the Finnish side. A Kelkka-Saari Farm appears on the 1:250,000 series (NQ 35, 36-6: southeast corner) (Figure 17). From marker No. IV/55 the boundary continues a northeasterly course to No. IV/56, where it turns sharply to the northwest, making a V-shaped bend, to marker No. IV/57, on the north bank of Isojoki River. From marker No. IV/58, about 60 meters (196 feet) from IV/57, the boundary goes in a northwesterly direction to Mount Hepo-ojankangas (No. IV/59), which is south of Lake Hepolampi.

From marker No. IV/59 the boundary continues in a straight north-westerly direction to marker No. IV/67, located on the Kuusamo-Aittokumpu road 160 meters (525 feet) northwest of the western end of of Kuntilahti Inlet Zaliv-Kuntilakhti/ (NQ 35, 36-6). South of marker No. IV/60 a trail crosses the boundary between Lakes Hepolampi

and Iso Kaivoslampi and passes through another small lake, Kaakkurilampi, north of No. IV/63.

From the Kuusamo-Aittokumpu road (marker No. IV/67) the boundary makes a slight bend, but still going in a northwesterly direction crosses Kuntikorvensuo Swamp, a track, and a forest lane (between markers No. IV/70 and IV/71), and then continues in a straight line to marker No. IV/73, located on a hill south of a small lake, Puurolampi. Continuing in the same direction, the boundary crosses Lake Juumajärvi between markers Nos. IV/75 and IV/76; Lake Ruoppijärvi is on the USSR side and Jumajoki River on the Finnish side (an Ozero Yuma-Yarvi and Lake Ruoppijärvi appear on the 1:250,000 series). North of Lake Juumajärvi the boundary crosses Pirttivaara Hill (a Pirttivaara Farm appears on the Soviet side (NQ 35, 36-67) and the Kuusamo-Paanajärvi (Tuutijärvi) road, at marker No. IV/81. In this entire sector the border passes through swamp and meadow interspersed with coniferous woodland. The boundary continues in a northwesterly direction, crossing the Kuusinkijoki River between markers Nos. IV/83 and IV/84. At marker No. IV/86 the boundary continues in a straight line to the middle of the Oulankajoki River (NQ 35, 36-6), then turns westward and follows the middle of the river along a double bend to boundary marker No. IV/91. North of marker No. IV/94 the border crosses a small lake (Uopajalampi) and then resumes a straight northwesterly course to marker No. IV/99, located on the summit of Mount Suistovaara, after crossing Suorapuro Brook (an Ozero Suora-Yarvi appears on the USSR side on the 1:250,000 series), which flows from Lake Suistojärvi.

From marker No. IV/99 the boundary continues in a northwesterly direction to Lake Kuivajärvi (north of marker No. IV/102), intersects two forest lanes, and extends to the Käylä-Sovajärvi road (marker No. IV/104). At this point the boundary, continuing in the same direction, crosses a trail south of marker No. IV/105, which is located on the summit of Mount Korvasvaara, and continues to marker No. IV/106 on the south-central shore of Lake Korvasjärvi (Ozero Korvas-Yarvi) (NQ 35, 36-6).

From Lake Korvasjärvi the border traverses a predominantly swampy and forested area, intersects a forest lane, and crosses the Kalliojoki Kallio-Yoki River. Between this point and the Hangasjoki River Ozero Khangas-Yarvi (marker No. TV/119), the boundary crosses another forest lane (the region is probably one of pines) and passes through an area of numerous peat bogs. Continuing in a general northwesterly direction, the border intersects the Niitselysjoki River (NQ 35, 36-6) between markers Nos. TV/121 and TV/122 and continues in a northwesterly course to marker No. TV/132, located in the middle of a brook flowing between two small lakes, East and West Sokkalampi.

From this point the boundary follows an irregular course along the main bed of an unnamed brook to marker No. IV/139, located in the middle of the Naataoja Stream (brook), which it follows downstream to marker No. IV/141, situated on the southeast tip of Lake Kortakkajärvi (Kartakkojärvi). The boundary in Lake Kortakkajärvi starts in a northwesterly direction, then goes straight north to marker No. IV/143, where it turns due east to No. IV/144. The Kieskisjoki River (both the river and a lake of the same name are shown on the Finnish side on the 1:250,000 series) flows into Lake Kortakkajärvi at the northwestern shore. From marker No. IV/144, the boundary goes in a northeasterly direction to No. IV/145 at the northeast corner of Lake Kortakkajärvi. Turning in a northwesterly direction, the border traverses a region of swampland to marker No. IV/148, located on the left side of the Harmusoja Stream at the point where a brook from Lake Haltiojärvi /Ozero Khaltio-Yarvi (NQ 35, 36-6) flows into it. From this marker the border extends in a general northerly direction, winding along the middle of the Harmusoja Stream to marker No. IV/152, located on the right side of the stream 21 meters (68.9 feet) southwest of the place where an unnamed brook flows into it.

From marker No. IV/152 the boundary goes in a northwesterly direction along a straight line, crossing Kutuoja ditch (brook) at marker No. IV/158, then traverses an area of open water, Possoliselkä, to marker No. IV/161, located on the western slope of a hill about 500 meters east of Lake Possolijärvi (Possolijarvi). The border continues in a northwesterly direction through a remote region to marker No. IV/173, located on the left side of Peunaoja Brook (ditch). In this sector the terrain consists mainly of swamps, bogs, meadows, and some coniferous woods. A trail intersects the boundary between markers Nos. IV/167 and IV/168. At No. IV/173 the boundary goes along the Peunaoja in a general westerly direction to marker No. IV/176, located in the middle of Liinasoja Stream north of its confluence with the Peunaoja. From No. IV/176 the border follows the middle of the Liinasoja downstream to marker No. IV/177, located in the middle of the stream where it flows into Lake Onkamojärvi (NQ 35, 36-6). The boundary crosses the lake in a northwesterly direction, turns slightly to the north, then veers sharply to the northeast at marker No. IV/180, and makes a shallow turn at No. IV/181. From marker No. IV/183, located on the right bank of Koirankyrönoja Stream approximately 30 meters (98 feet) northwest of its confluence with Siikaoja Stream /Sikaoya/, the boundary continues along the middle of the Koirankyrönoja in a general northwesterly direction to markers Nos. IV/186-IV/187. From marker No. IV/187 the boundary goes in a northwesterly direction along a straight line to marker No. IV/190, located at the eastern edge of the natural boundary between a coniferous forest and a swamp, and then on to No. IV/194, situated at the edge of the Pikkulëhdonjänkä Swamp northeast of Mount

Murtovaara. At this point the border takes a more northerly route to marker No. IV/200, located on the western slope of Mount Särkivaara/Iso Sarkivaara/. In this sector the boundary passes through an area of swamps and bog lowlands with some scattered coniferous woods. The boundary then goes in a northwesterly direction from marker No. IV/200 to No. IV/204, which is located at the confluence of the Pekeloja and Kaulaoja Streams, and to markers Nos. IV/206 and V/1. In this part of the Salla sector, 1940 boundary, numerous lanes crisscross the border, principally in a southwest to northeast direction. It is quite probable that these correspond to the forest lanes, or firebreaks, previously mentioned.

Sector No. 6, Kuolajärvi-Kelloselkä Road to Mount Puitsitunturi:

North of marker No. V/1 the boundary crosses the Salla (Kuola-järvi) Kelloselkä railroad (probably a 5-foot-gauge, single-track line)* and continues in a northeasterly direction along a straight line to marker No. V/5, located in a forest 60 meters (196.8 feet) southwest of a clearing that intersects the boundary in the Sikakangas area. From here the border continues in a northeasterly direction, turning slightly more to the east, crosses what appear to be three winter roads (presumably swamp area traversable when frozen over) north of markers Nos. V/7 and V/8, and continues to marker No. V/10, on the left bank of the Sallajoki [Salla-Yoki] River (NQ 35, 36-6: northern part). In this sector the boundary crosses Kiekioja Brook (ditch) between markers Nos. V/8 and V/9. The border then extends along the middle of the Sallajoki River to marker No. V/11, situated on the right bank of the river, before intersecting the Kuolajärvi-Kotala road between markers Nos. V/12 and V/13. In this whole sector there are numerous forest lanes on both sides of the border.

From marker No. V/13 the boundary goes in a northeasterly course to No. V/19, located 436 meters (1,430 feet) northeast of its intersection with a path northeast of Koltaanharju Ridge. Again, a number of forest lanes intersect the boundary, as well as a winter road (south of marker No. V/15) and a path (south of No. V/16). From marker No. V/19 the boundary continues in the same direction, intersecting two lanes (at markers Nos. V/20 and V/22) and crossing a trail or path between markers Nos. V/23 and V/24 and again between Nos. V/24 and V/25. North of this point the boundary crosses the Tennijoki (appears as Tenniö Joki /Teniye-yoki/ on AMS 1:250,000 series) River at marker No. V/26 (Savukoski; NQ 35, 36-2: southeast corner). This sector is primarily a swamp and bog area with sparse

^{*}It has recently been reported that the USSR has dismantled a section of railway track for at least 400 yards on its side of the Finnish-Soviet border eastward from Kelloselkä.

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woods. From the Tenniö Joki River the boundary continues in a northeasterly direction to the Käämeoja (Nayayaarmeoy) Stream, between markers Nos. V/38 and V/39, and then on to marker No. V/44, located on the northwest slope of Nilitunturi* in a part of the forest where there are few trees. From this point the border follows a northeasterly course along the Satsijoki River between markers Nos. V/48 and V/49, intersecting a clearing at marker No. V/50. The boundary then crosses Lake Satsijärvi (at marker No. V/51), continues to marker No. V/59 in a general northeasterly direction, and then bends along the middle of the Tenniö Joki (Tenniö joki) River (NQ 35, 36-2) to marker No. V/83, situated in the middle of the river. This marker is approximately 6.4 kilometers (about 4 miles) southwest of the intersection of the boundary by the Sorsajoki River (No. V/92). A small lake, Siutoivalampi, appears on the Finnish side of the border on the 1:250,000 series. Between markers Nos. V/85 and V/86 a forest lane cuts diagonally across the boundary.

From the Sorsajoki River the border extends in a northeasterly direction, crossing a clearing south of marker No. V/95 and continuing on to marker No. V/99, located at the edge of the forest 276 meters (905.5 feet) from a rather high elevation (about 1,600 feet) on the Finnish side. Continuing along a general northeasterly course the border crosses a lane at marker No. V/102 and continues to No. V/105, located on the right bank of the Tuntsajoki /Tuntsa-yoki7 River (NQ 35, 36-2) 40 meters (131 feet) from the shoreline. here the boundary goes in a north-northeasterly direction to Jaurakkioja (Jaurukkioja) Stream (No. V/109) and then on to marker No. V/122, at which point it crosses Luuntaittumaoja Stream (a Luuntaitt Stream, or Brook, is shown on the Finnish side on the 1:250,000 series). The boundary continues in a northeasterly direction in a straight line from Luuntaittumaoja (marker No. V/122) to marker No. 857, located on Mount Puitsitunturi on the old state boundary between the USSR and Finland (Kandalaksha; NQ 35, 36-3: 30°00'-750). In this sector the border passes through predominantly swampy land and crosses a small unnamed lake between boundary markers Nos. V/124 and V/125.

Sector No. 7, Mount Puitsitunturi to Korvatunturi Mountain:

At marker No. 857, the boundary makes a V turn in a north-westerly direction and follows the old Soviet-Finnish boundary to marker No. 858. North of Mount Puitsitunturi the border intersects Papuhaara (Po-puhaara) Stream (Savukoski; NQ 35, 36-2: northeast

^{*}The Finnish ending "tunturi" means barren arctic mountain or hill (found primarily north of the Arctic Circle).

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corner) and then crosses the Hirvasjoki River at a point southeast of marker No. 858. At Mount Nuorttitunturi (No. 858), the boundary turns slightly more to the north but continues a generally north-westerly course, passing through swamp regions and areas of coniferous forests to marker No. 859, Korvatunturi Mountain (Virtaniemi; NR 35, 36-11: 59-755). In this sector the boundary crosses the Törmäoja (Törmäjoki) and Nuortljoki (Nuorttijoki) Rivers (NQ 35, 36-2), Korvatunturi Mountain is approximately 12.5 kilometers (about 8 miles) north of Nuortljoki River.

Sector No. 8, Korvatunturi Mountain to Krokfjell Mountain:

In this extreme northern area -- the Pechanga sector (Murmanskaya Oblast) -- the boundary line is identical with the pre-1917 border, which is the same as that between the former Grand Duchy of Finland and Tsarist Russia.* From marker No. 859 the boundary continues in a northwesterly direction to the Jaurijoki [Yauri-Yoki] River (NR 35, 36-11: 57-756), a distance of approximately 23.5 kilometers (about 14.6 miles). In this heavily wooded sector the border passes through some swampland and crosses several streams. Continuing in the same direction for a few kilometers the boundary reaches Talkkunapää Point (NR 35, 36-11: 56-756) (elevation approximately 2,000 feet) before turning in a north-northwesterly direction. Talkkunapää and the surrounding territory are shown on the 1:250,000 series as a barren area devoid of woodland (possibly an area of bedrock).

From here the boundary extends for about 8 kilometers (5 miles) to the Aaddar (Anterijoki) Anteri-Yoki River (NR 35, 36-11: 56-757), crosses the river, and continues in a northwesterly direction, intersecting several small streams flowing from a group of lakes on the Finnish side, principally Lake Kiertämäjärvi. North of this sector the boundary passes through a zone of birch brush. The 1:250,000 series shows another area similar to that of Talkkunapää minus the forested cover of the surrounding region. The boundary follows the same northwesterly course for about 6.5 kilometers (about 4 miles), at which point it crosses the Lutto Lutto-Yoki (NR 35, 36-11: 56-759). On the northwestern shore of the river, on the Finnish side, is Raja Jooseppi Hut, where the border intersects a main winter road. Two trails also appear to the southeast of the river, on the Soviet side. The boundary continues in a northwesterly

^{*}The demarcation maps and protocols for this portion of the boundary are not available. AMS Series M515, sheet NR 35, 36-11, Virtaniemi; Netzbild von Petsamo; and three sheets of Suomen Taloudellinen Kartta (1945-46) were used in describing this sector (see Maps of the Boundary, p. 58).

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direction for approximately 8 kilometers (about 5 miles) to a barren point, Suorsapää, with an elevation of about 1,550 feet.

From Suorsapää the boundary takes a northeasterly course to an arctic mountain, Konnostunturi (NR 35, 36-11: 56-762), situated in a birch-shrub zone at an elevation of about 1,300 feet. In this sector the boundary crosses the Kirvausjoki River and the southeastern tip of Lake Hippisjärvi (Kiepsajaur) leaving most of Lake Madsashjaur /Ozero Madsash-Yaur on the Soviet side. A trail intersects the border about halfway between the lake and river, with a small lake (possibly Rautalampi) crossing the boundary line southwest of Konnostunturi. From here the boundary follows a northeasterly course through a region of lakes, intersects a stream flowing from Lake Sulkusjärvi (NR 35, 36-11: 56-763), and reaches the base point of the Finnish-Soviet boundary at marker No. A/44,* which is set in a clearing on rocky ground 977.4 meters (3,206 feet) north of boundary marker No. A/43 (fixed by demarcation documents in 1945). The coordinates of boundary marker No. A/44 are 68°52'13"N-28°48'07"E.

From marker No. A/44 the boundary extends in a west-northwest direction through a rocky region to marker No. A/45, set in a clearing on the north slope of an unnamed hill. Continuing in the same direction the boundary crosses a swampy depression and rises along the rocky eastern slope of the Calkokotamaa Range to marker No. A/47, located on its summit. From here the boundary extends in a northwesterly direction along the steep western slope of the Calkokotamaa Range, crosses the southern part of Lake Eastern Calkolampi, and continues for 0.8 kilometer (about half a mile) to marker No. A/50, situated in a clearing on the isthmus between Eastern and Western Calkolampi. The boundary then goes in the same west-northwest direction, touches the north shore of Lake Eastern Apilampi, and crosses a swamp before reaching marker No. A/56, located in a rocky clearing on a slight elevation. Maintaining a west-northwest course to marker No. A/57, the boundary intersects Lake Kottilampi, then continues to a height east of the shore of Lake Vipujärvi (Tshuhtsjärvi). At this point it crosses the lake, leaving one small unnamed island on the USSR side and three unnamed islands on the Finnish side.

^{*}This is the initial point of the border between Finland and the USSR in the region of the Yaniskoski Hydroelectric Power Plant and the Niskakoski Control Dam. In order to conduct field demarcation work the area was divided into two sections -- the southern, 17.7 kilometers (11 miles) long, marked by Finland, and the northern, 25.6 kilometers (16 miles) long, marked by the USSR.

The boundary then continues to marker No. A/59, set up in a clearing 159 meters (about 521 feet) west of the shore of Lake Vipujärvi before following a direct cut-through west, crossing a depression and leaving a small unnamed lake on the USSR side, to marker No. A/60. From here the boundary goes along the same course, crosses two depressions, and extends to the southern slope of the Caloselka Ridge (marker No. A/63). Continuing in a westerly direction for approximately 3.4 kilometers (about 2.1 miles) the boundary intersects three bays on the southern part of Lake Sortojärvi before reaching marker No. A/68, located in a clearing on an unnamed rocky height 188 meters (about 617 feet) from the western shore of the lake. From marker No. A/68 the boundary follows a westerly course, crosses an unnamed brook and swamp, and continues to marker No. A/72.

Turning in a northwesterly direction, the boundary then passes through a rocky area and crosses a wide depression, a section of cut forest, and a small lake, Rakkalampi, to marker No. A/75, situated in a clearing on the western slope of an unnamed height. About a kilometer (0.6 mile) farther on in the same direction is marker No. A/78, located in a clearing on rocky ground. In this area the border crosses the Pechenga-Rovaniemi (Arctic) Highway (Figure 18) and the Pasvikelv (NR 35, 36-11: 55-764). Virtaniemi /Virtaniyemi / settlement is located at the point at which the border intersects the Arctic Highway (shown on the 1:250,000 series). From marker No. A/78 the boundary continues a northwesterly course along the southwestern rocky slope of the Mustikkavaara Mountains to marker No. A/80, situated in a clearing on the southern slope. This boundary marker is the terminal point of the southern section and is the base point of the northern section.

From boundary marker No. A/80, the border follows a direct cutthrough northeast by east to marker No. A/84, crosses an unnamed stream flowing from Lake Joutsenjarvest, and passes through a hilly region to marker No. A/85, set up in a clearing on an elevation 100 meters (328 feet) southwest of a grassy swamp. From here the boundary continues in the same direction for a few kilometers to marker No. A/89, situated in a clearing on the southeast slope of the Suovaselka Range. Maintaining a northeasterly course, the boundary follows a direct cut-through along the northeast slope of the Suovaselka Range, leaving a small unnamed lake on the USSR side. It then crosses a depression and an unnamed stream before continuing in the same direction to marker No. A/91. At this point it intersects a stream (Ristikurunojan) in a deep ravine, leaving an unnamed lake on the Finnish side.

From marker No. A/92 to marker No. A/97 -- approximately 2.3 kilometers (about 1.4 miles) -- the boundary crosses numerous wide,

shallow depressions. From marker No. A/97 the border takes a northeasterly course to the southeastern slope of the Sakkiselka Mountains (marker No. A/99), descends along the northeastern slope of the mountains, crosses Sakkiselanoja Stream, and then climbs along the southwestern slope of an elevation with a benchmark at 210.6 meters (about 691 feet) to marker No. A/100. Continuing in a northeasterly direction for about 3.7 kilometers (approximately 2.3 miles) to marker No. A/105, the boundary passes through a number of depressions, crosses a wooded footpath, and intersects an unnamed stream. Between markers Nos. A/105 and A/109 the boundary follows a direct cut-through northeast, crossing a few depressions and unnamed elevations. From marker No. A/109 the boundary, continuing in a northeasterly course, crosses a swampy depression to marker No. A/110, situated in a clearing on a slight elevation 94 meters (308 feet) southwest of Lake Luppojarvenlompolo. The boundary then intersects Lake Luppojarvenlompolo, crosses a ravine (at marker No. A/113), and descends along the northeastern slope of an unnamed elevation to marker No. A/116. In this sector of approximately 3.6 kilometers (about 2.2 miles), the border passes through a swampy depression and a small unnamed lake. From marker No. A/116 the boundary follows a direct cut-through northeast to marker No. A/117, then crosses an unnamed stream and a number of rocky depressions and spurs of Krokfjell Mountain to the Krokfjell boundary marker (69°03'11"N-28°55'50"E), marking the trijunction of the Soviet, Finnish, and Norwegian boundaries.

C. Boundary Marking, Administration, and Security

The boundary line between Finland and the Soviet Union in the territory between the Gulf of Finland and the trijunction of the frontiers of Finland, Norway, and the USSR is in most places marked by two boundary posts of wood, stone, or masonry or by two stone mounds, one on each side of the boundary, usually 2.5 meters from the line.* In some instances, one stone mound or wooden post whose center coincides with the actual boundary line is used. Along much of the pre-1940 border the markers are cairns and natural stones or rocks. In the entire 43.3 kilometers (26.9 miles) of the boundary in the Yaniskoski-Niskakoski area (1947 cession) are 74 markers, of which 4 are stone, 69 are pairs of wooden posts, and 1 is a three-posted marker. Boundary markers are located at all important spots, such as railroad and road crossings (Figure 19), inhabited areas, and the shores of the principal water bodies. In some straight stretches of the boundary the posts are 1 or 2 kilometers apart, in other sections they are 5 kilometers apart, and in sparsely populated regions they

^{*}Primary sources for the physical description and marking of the 1940 and 1947 Finnish-USSR boundary are the Protocols. 17, 24/

are within visible range of one another. The last arrangement is especially common along the old-domain border. Turning-point markers of wood or stone, 60 centimeters (about 2 feet) high, are placed on the boundary line where it departs from a straight line.

The course of the land boundary in forested areas is indicated by a clearing on each side of the border. The width of this cleared strip in the Salla and southeast sectors (the 1940 boundaries) is 5 meters (16.4 feet) on each side, or a total width of 10 meters. In the central and upper sectors (the old-domain borders) and in the Yaniskoski-Niskakoski region the boundary strip is 4 meters (13.12 feet) wide on each side of the line, measured from the boundary to the tree branches. 23/ A Finnish-Soviet agreement of 1949 provides that this strip shall be kept in proper condition and cleared of brushwood and other growth interfering with visibility. 25/

In sectors where the boundary crosses lakes, rivers, or streams the line is marked by two posts or two stone mounds, one on each shore or one on one shore and one on an island. In certain instances, three posts, situated at various distances from each other, denote the transition of the boundary line from a land to a water sector (or from water to land). According to the survey agreement for the 1934 old-domain boundary, which is presumably applicable also to the 1940 boundary, whenever a sector that passes through a body of water has not been clearly defined, the following principles are to be applied: If the boundary follows a river in which the main channel can be determined, the line extends along the deepest channel bed (the thalweg). In the smaller rivers, the boundary line runs in such a manner that at mean water level each point is at an equal distance from the shore of each country, figured from the nearest spot on the mainland on each side or on an island or rock that is permanently above water level. Where it runs through a lake, the boundary is a straight line connecting the points at which the land boundary touches the edges of the lake. Ownership of islands or rocks by one country or the other is determined with reference to the boundary line. If a river or stream that formerly constituted a natural boundary changes its channel, the boundary remains as originally determined. In cases where changes in the shores threaten to shift the river channel or the water course, the state that would suffer damage or inconvenience from such a shift has the right to take preventive measures. 26/

The enumeration of markers of the 1940 boundary is from south to north according to sectors. The numbers of the boundary markers are written as fractions, of which the numerator (designated by a Roman numeral) represents the number of the sector and the denominator (an Arabic numeral) is the serial number of the boundary marker. The

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old-domain boundary markers are designated by Arabic numeral only; and numbers of the markers in the Yaniskoski-Niskakoski area are preceded by the letter A.

The height of the boundary posts above the ground is 2.06 meters (6.75 feet). The cross section of the posts is a square 22 centimeters (8.6 inches) on a side, 27/ except on the old-domain boundary, where the cross section is 20 centimeters (7.8 inches) square. Each post is capped by a pyramid. To increase the stability of the posts, two crosspieces, approximately 80 centimeters (2.6 feet) long, are nailed at right angles to the bottom part of each post on the 1940 border but not on the old-domain boundary. The posts are set about 1 meter below the surface of the ground. Buried under the center point of each post on the 1940 boundary are pieces of glass, charcoal, or 5 stones; under those of the old-domain boundary a bottle, charcoal, or 5 stones are placed. A mound of earth 14 centimeters (5.5 inches) high is built up around each post and covered by turf, brick, or stone. Water moldings around the bottom of the posts are used on the 1940 boundaries only.

On the Finnish side, the posts were originally painted all white. In 1949, however, with Soviet approval, the Finns changed to stripes of white and "official" blue. In all sectors of the Finnish boundary, the posts are probably now painted with horizontal blue and white stripes, 19 centimeters (nearly 8 inches) in width. On the Soviet side, the posts are painted with alternate vermilion and green horizontal stripes the same width as the sides of the post. Thus painted, the posts on both sides of the border should be clearly visible when the ground is covered with snow.

On some of the markers on the Finnish side the numbers are painted with black enamel directly on the posts. In other sections of the boundary, a sheet-metal plate measuring 15 x 16 centimeters (5.9 x 6.3 inches) is attached to each post. This plate is treated with rust preventive and painted white with black enamel numbers. On all sections of the boundary facing the Soviet Union, boundary shields or plaques are attached to the posts 7 centimeters (2.75 inches) from the lower edge of the pyramid. These boundary plaques are made of cast iron with black edges and a base of red enamel on which Finland's coat-of-arms (the lion) is embossed and painted in gold. On the USSR posts is the Russian emblem, a wreath surrounding the hammer and sickle. In the Yaniskoski-Niskakoski area, boundary-marker numbers on the wooden posts are black on a white background on the Finnish side and white on a green background on the Soviet side. Turning-point markers are painted white wherever possible, but stone or masonary posts are unpainted.

Maintenance of boundary markers (wooden and stone posts, earth and stone mounds, signs of alignment, and others) in such a way that their location, appearance, form, size, and coloring conform to all requirements has been agreed to by Finland and the USSR. The care of boundary markers is divided between the two countries. Each country maintains the markers on its own territory; responsibility for those placed exactly on the line of the land frontier is divided, the even-numbered markers being cared for by the USSR and the odd-numbered by Finland. In case of loss, destruction, or damage of a boundary marker, the nation on whose territory such a marker is located or to whom it is assigned shall take immediate measures for its restoration or repair.

The boundary between Finland and the USSR is a "closed border." This means that boundary crossings are restricted to the minimum. The Soviet Union is meticulous in securing the inviolability of its own side of the border, and it has concluded precise agreements with Finland regarding the frontier zone. A belt of land 7 kilometers (4.4 miles) wide along the border on the Soviet side is under the absolute control of the People's Commissariat of the Interior. Adjacent to the 7-kilometer belt is a 20-kilometer (12.4-mile) zone that can be entered only with special police permission.

The attitude of the Finns toward the problem of guarding the border is quite different from that of the Soviets. It would be considered a restriction of individual liberty to prevent Finnish civilians from living in close proximity to the border. Because of the geopolitical position of Finland, however, the Government does all it can to prevent illegal border crossings by its nationals and has placed warning signs along the roads (Figures 20 and 21). An example of its efforts to prevent violations of the Soviet boundary is a recently built 5-1/2-foot-high reindeer fence that extends for 390 miles along the Lapland section of the Finnish-Soviet border. (The exact termini of the fence are not known.)

The need for a Finnish border guard first arose when Finland succeeded in obtaining its independence. A civil frontier patrol was then established, which was later integrated into the Finnish armed forces. During World War II the Finnish Border Guard was used as the backbone for the organization of new military units (Figure 22).

The present Border Guard is composed of regular army officers and volunteers who are directly under the operational control of the Minister of Interior. The Guard is commanded by a major general of the Finnish Army, located in Helsinki, who is assisted by a head-quarters staff of 56 persons. The total strength of the Border Guard

is believed to be 4,083 (all ranks), with its main concentrations in the following areas: (1) Southeast Finland (Karelian frontier); (2) northern boundary of Porkkala enclave; (3) Northeast Finland (Soviet frontier); (4) western sectors along Norwegian and Swedish borders.

The nucleus of the Border Guard consists of personnel with long service who have joined the Guard on completion of their military service but before reaching 30 years of age. These men must have at least an elementary-school education, must join the Guard for a minimum of 1 year, and must belong to the Army Reserve. Conscripts may be assigned to service with the Border Guard instead of with the Defense Forces, and are usually stationed near their respective home districts. Officers and noncommissioned officers may be detached from the Defense Forces for duty with the Guard. Recruits for the Border Guard are frequently obtained through newspaper advertising.

The functions and activities of the Border Guard are prescribed by laws and regulations pertaining to the Guard itself and by other legislation on related matters, such as the border zone. Some of the principal duties of the Guard are: (1) the surveillance of the boundary and prevention and reporting of unauthorized crossings; (2) prevention and detection of contraband traffic across the border; (3) the prohibition of any activities in the border zone which may create border incidents; (4) care and maintenance of boundaries, boundary fences, boundary zones, and boundary markers and monuments; (5) responsibility for maintaining liaison with the border officials of a neighboring country; and (6) the settlement of border disputes and incidents with neighboring border authorities.

The Finnish Border Guard is under orders not to observe any happenings on the Soviet side of the border, but merely to safeguard the border from violation from the Finnish side. They are interested primarily in activities that are directed against or might be harmful to the security of Finland.

Radio communication is maintained between headquarters and units of the Border Guard, which in turn have subsidiary radio nets down to companies and posts. At present there are 132 radio stations in operation, 105 in the Coast Guard and 27 in the Border Guard. Headquarters and lower echelons are connected by private telephones. Telegraphic communications and visual signals are utilized whenever possible.

Transportation needs of the Border Guard are met by making use of bicycles, horses, carts (600-pound, 1-horse, 2-wheeled), passenger cars, 2-1/2- or 3-ton trucks, and man-drawn boat sledges during the winter. Skis are standard equipment for all land-based Guard units.

The USSR guards its border with Finland primarily by patrolling. Soviet patrols have been observed along the entire length of the border, even in the most remote sections. In winter, members of such patrols wear white snowsuits and are equipped with skis. The complement of a patrol in the northern area is usually 1 non-commissioned officer and 3 or 4 men, but occasionally it may have as many as 6 or 7 men. In the summer, Soviet patrols have been known to make their rounds after midnight, accompanied by trained dogs. Each boundary post is inspected by the patrol. (Figure 23.)

The Soviet Border Guard is perpetually alert, suspicious, and highly disciplined. Over-all training includes the art of forming ambuscades, as well as the careful observation of occurrences on the Finnish side of the border.

Soviet lookout posts supplement the patrols. It has been reported that in the Petsamo border region and farther south in the Salla area lookout posts are so numerous that they seem to form an unbroken chain. A perpetual watch is maintained in important areas, such as those where there are roads, but not in the more remote regions. The security of the Arctic Highway, which is within the frontier zone, is the responsibility of the MGB Border Guards (pogranichniki), and the zone here is well patrolled.

In the more thickly populated areas along the southern sector of the boundary, 5-foot barbed-wire barriers have been erected. Information is not available to indicate the length of this fence or the length of the gap between it and the recently built Finnish reindeer fence. It was noted recently, however, that Soviet defense activities on all Finnish borders have been speeded up.

D. Maps of the Boundary

The exact location of the present Finnish-USSR boundary is best shown on the official demarcation maps. Those of the Mixed Boundary Commission (1 and 2 in list at end of section) show the exact position of the boundary line and topographic detail within the boundary strip. The five sections of the boundary involved in the terms of cession under the Treaty of Peace of 1940 are shown on the following sheets of the 1:20,000 demarcation map (1): Section 1, sheets I/1--I/4; Section 2, sheets II/1-II/5; Section 3, sheets III/1-III/6; Section 4, sheets IV/1-IV/7; Section 5, sheets V/1-V/4. Sections 1 through 3 depict the 1940 border from the Gulf of Finland (marker No. I/1) to Lake Virmajärvi (marker No. III/277/577) on the "old domain" border (those sectors of the Finnish-Soviet boundary not affected by the 1940 changes). Sections 4 and 5 show the 1940 boundary from marker No. 755 (IV/1) on the old-domain border at Lake Kinnusenjärvi to

marker No. 857 at Mount Puitsitunturi (north of marker No. V/125), the Salla sector. The coverage of the border area at the scale of 1:25,000 (2) (Sheets 16 through 38, and 51 through 54) shows the course of the boundary in the central sector (markers Nos. 577 to 775) and the upper sector (markers Nos. 857 to 859) of the old (pre-1940) Finnish-Soviet border.

Official large-scale demarcation maps are not available for the section of the boundary from Korvatunturi (marker No. 859) to the initial marker of the Yaniskoski-Niskakoski border (No. A/44) and then to Krokfjell, the meeting point of the present territories of the USSR, Norway, and Finland. The border in this northernmost region is identical with the pre-1917 boundary with the exception of the area of the 1947 cession (Yaniskoski-Niskakoski). Maps at smaller scales (3, 4, 5, 6, and 7) were used in describing this portion of the boundary.

Two Army Map Service series at 1:250,000 (3 and 7) together cover the entire Finnish-Soviet frontier, and these were used in conjunction with the demarcation and other maps, although their usefulness is limited because of the small scale.

The land boundary in the 1940 Finnish-Soviet frontier of the Karelian sector is given in great detail on 5 Finnish sheets at 1:100,000 (8). However, the 21 border strips show the Finnish side of the boundary only, and orientation is difficult.

Large-scale Soviet maps produced since the USSR acquired Pechenga and Yaniskoski-Niskakoski are not available. The present south-western boundary of the Pechenga area (identical with the pre-1917 boundary of the Grand Duchy of Finland) is shown on a 1:200,000 map (4), but essential detail is omitted.

The entire ceded area in the extreme northern section of the boundary (Yaniskoski-Niskakoski) is portrayed on the Finnish 1:100,000 photostats (6), whereas on the 1950 printed sheets (5) only the Finnish side is presented.

The official demarcation maps are supplemented by descriptive protocols.

1. Karta Gosudarstvennoy Granitsy Soyuza Sovetskikh
Sotsialisticheskikh Respublik i Finlyandii (Socialististen Neuvostor
Tasavaltojen Liiton Ja Suomen Valtakunnan Rajan Kartta) (Map of the
State Boundary Between the Soviet Socialist Republic and Finland);
1:20,000; 26 sheets (5 sections); in Russian and Finnish; 1940; CIA
Map Library Call No. 34269.

- 2. Kartta Suomen Tasavallan Ja Sosialististen Neuvostotasavaltojen Liiton Välisestä Valtakunnanrajasta Laatokasta Pohjoiseen Jäämereen (Karta Granitsy Mezhdu Soyuzom Sovetskikh Sotsialisticheskikh Respublik i Finlyandskoy Respublikoy ot Ladozhskogo Ozera Do Sev. Ledovitogo Okeana) (Map of the Finnish Republic and the USSR. Revision of the National Boundary from Lake Ladoga to the Arctic Ocean); 1:25,000; 27 sheets, in Finnish, title and legend in Finnish and Russian; revised 1934, 1936, and 1937; CIA Map Library Call No. 79399.
- 3. <u>Finland-Scandinavia 1:250,000</u>; Army Map Service Series M515, Sheets Nos. NR 35, 36-11, <u>Virtaniemi</u>, and NR 35, 36-8, <u>Pechenga</u>; 1953; AMS Library Call No. IM 3-30-90,000-250.
- 4. <u>Netzbild von Petsamo</u>; 1:200,000; Helsinki, 1933 (reprint); CIA Map Library Call No. 47118.
- 5. Suomen Taloudellinen Kartta; 1:100,000; /Finnish/Maanmittaushallitus (General Survey Office); Sheets Nos. 3744-4722-4724, Talkkunapää (1945), 3833-4811, Raja-Jooseppi (1945), 3834-4812, Konnostunturi (1946), and 3843-4821, Paatsvuono (1950); CIA Map Library Call No. 35500.
- 6. <u>Kartta Jäniskosken Vesivoimalaitoksen Ja Niskakosen Säännöstelypadon Alueesta</u>; 1:100,000; photostat; in Finnish; 1947; CIA Map Library Call No. 38196. AMS 21M-2-28-27531 100
- 7. Eastern Europe 1:250,000; Army Map Service Series N501; 1952; AMS Library Call No. N23-30-90,000-250.
- 8. <u>Uusi Valtakunnanraja (Voimassa kunnes raja maastossa käydään)</u>; 1:100,000; in Finnish; 5 sheets (21 sections); 1940; CIA Map Library Call No. 47458.

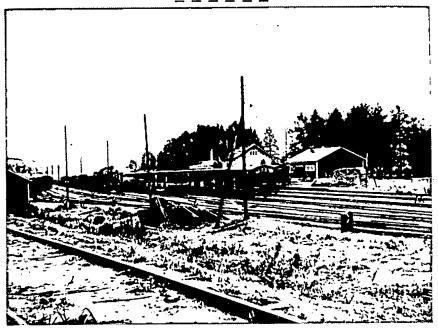


Figure 10. The railroad station at Vainikkala (Finland), used regularly for traffic across the border.

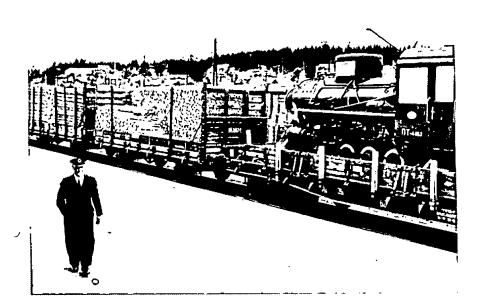


Figure 11. Reparations goods passing the border at Vainikkala.

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Figure 12. View from the Imatran Valtionhottelli (Imatra), looking toward the east and the Finnish-USSR border in the distance.

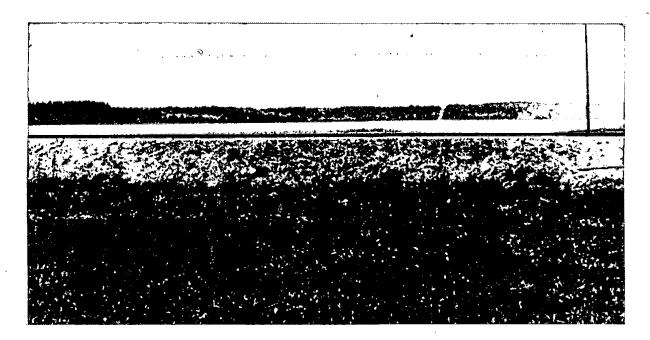


Figure 13. Railroad and lake northeast of Imatra. The swath through the forest (right background) marks the Finnish-USSR border. Finland is on the left, the USSR on the right.

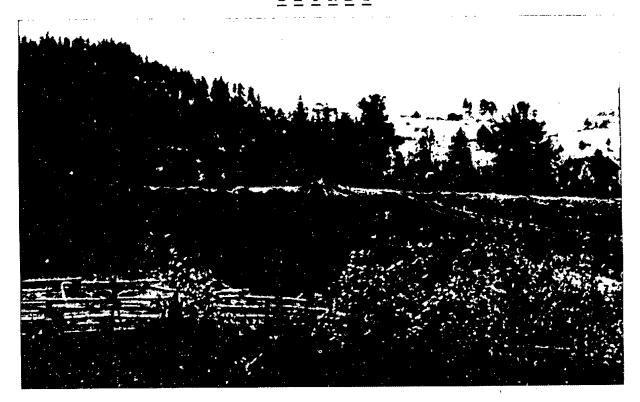


Figure 14. The Finnish-USSR border in the vicinity of Simpele. The lake in the background, probably Simpelenjärvi, separates the two countries.

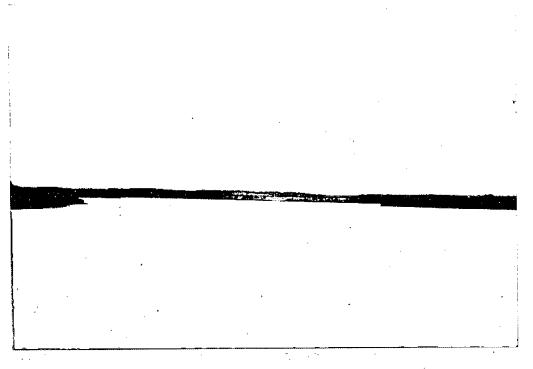


Figure 15. Looking toward the Soviet border across an inlet of Lake Simpelenjärvi, northeast of the town of Simpele.

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Figure 16. The Soviet town of Vyartsilya (Värtsilä) near the present Karelo-Finnish border (62°12'N-30°42'E).

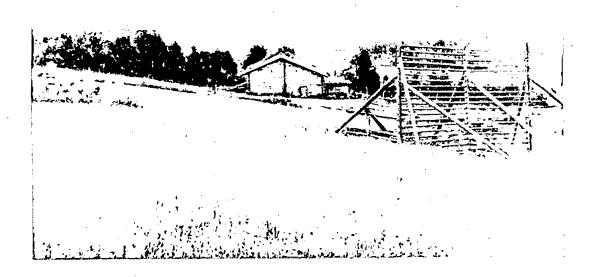


Figure 17. Isolated farm surrounded by forest in the central portion of the border region.

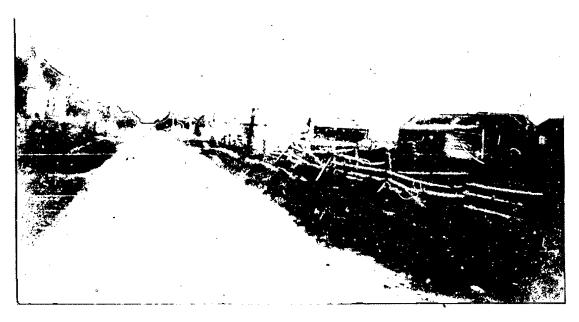


Figure 18. Scene along the Arctic Highway (exact location unknown), photographed at midnight.

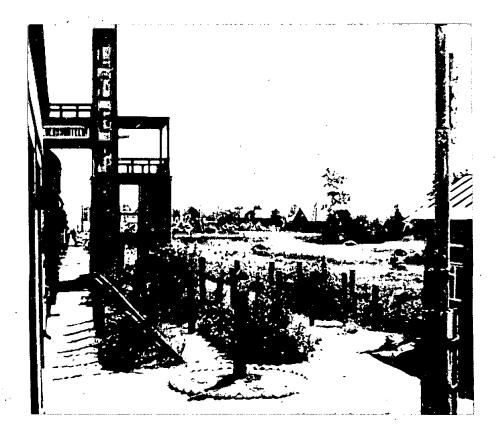


Figure 19. A wooden marker at a railroad crossing along the Finnish-USSR boundary.

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Figure 20. Check point at entrance to 2-mile-wide zone along the Finnish-Soviet border.

Figure 21. The Arctic Highway entering the Finnish-Soviet border zone near Virtaniemi.



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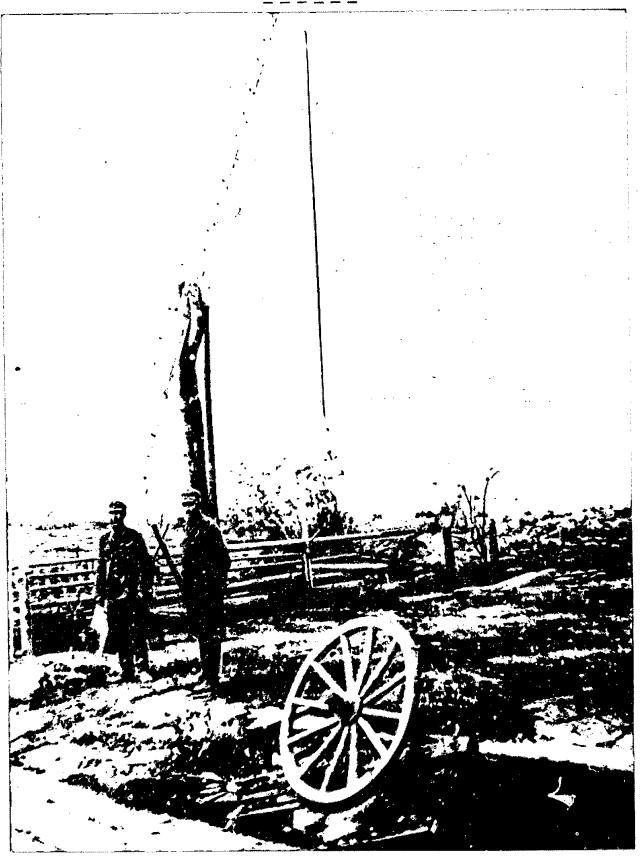


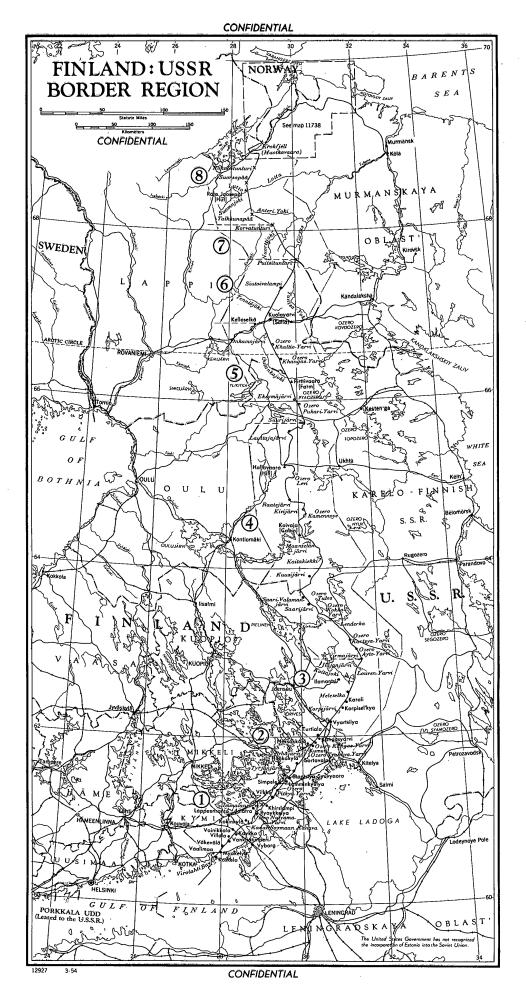
Figure 22. Border patrol on guard along the boundary between old Finland (before the Winter War of 1939-40) and the Soviet Union.

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Figure 23. Finnish border guard accompanied by a dog. Note the pair of boundary markers directly behind the guard.

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III. Poland-USSR Border

A. History of the Boundary

At the close of World War I in November 1918, with the endorsement of the victorious Allies, Poland became an independent republic. The Paris Peace Conference in 1919 provided for the establishment of the western and southern boundaries of Poland, in general along ethnic lines. The eastern boundary presented more of a problem because of the mixed nature of the population in that area. December 1919 the Supreme Council of the Allied Powers set a line within which the Polish Government could organize its administration. This boundary became known as the "Curzon Line" the following year, when Lord Curzon proposed that it become the armistice line between Polish and Soviet forces.* Before the Supreme Council's announcement, two alternative lines had been suggested as southern extensions of the provisional boundary through Eastern Galicia. One of these ran to the east of L'vov (Lwow), thus including that town in Poland; the other ran a considerable distance to the west of L'vov. Neither of these two lines was embodied in the Supreme Council's December 1919 boundary, but the eastern line was shown on the map accompanying the announcement and later was popularly accepted as part of the Curzon Line. The present boundary is in some respects similar to the alternative western line. 28, 29, 30/

Drawn on ethnic principles, the Supreme Council line excluded from Poland large areas inhabited by Lithuanians, Belorussians, and Ukrainians. The Supreme Council, however, intended only that this line should describe the minimum eastern extension of Poland; it was not the purpose to prevent the Polish and Soviet Governments from agreeing upon a final boundary farther to the east. The Polish Government had, in fact, insisted upon the territorial limits of 1772 (before the first partition of Poland), and after Polish forces defeated the forces of Soviet Russia, Poland received most of its claims by the Treaty of Riga, 18 March 1921. In accordance with Article 2 of the Treaty of Riga, the eastern frontier was to follow plans drawn up by the Polish-Soviet Delimitation Commission and mentioned in the General Final Protocol of the Commission signed 31 July 1922. 31/ The new boundary of Poland ran southeast from the Latvian frontier, then generally due south, passing about 29 kilometers (18 miles) west of Minsk then some 113 kilometers (70 miles) east of Pinsk. In the neighborhood of Ostrog the line turned slightly southwest and continued in that direction for some 40 kilometers

^{*}The Curzon Line is also in part identical with the western border of the Polish territories annexed by Russia in the Third Partition of Poland in 1795.

(about 25 miles). Then it turned due south again to the Zbrucz River, which it followed to its junction with the Dniester Dnestr. In Paris in March 1923, the Conference of Ambassadors of the Principal Allied and Associated Powers recognized the boundary line as delimited by the two countries on 23 November 1922. 32/

At the close of the Polish-Soviet War in 1920, the Polish Government seized the Wilno region from Lithuania, later incorporating it into Poland. In 1923 the Conference of Ambassadors officially allotted Wilno to Poland, an act that touched off a controversy between Poland and Lithuania that continued until 1938.

On 23 August 1939, the USSR concluded a nonaggression pact with Germany, and on 1 September Hitler invaded Poland, precipitating World War II. On 17 September 1939 the Soviet armies crossed the eastern frontier of Poland, and by the end of the month the German-Soviet conquest of Poland was complete. The treaty signed on 28 September 1939 by Foreign Ministers von Ribbentrop and Molotov defined a common German-Soviet frontier resulting in the fourth partition of Poland. 33/ The Ribbentrop-Molotov line ran due west from the tip of Lithuania to the frontier of East Prussia, giving Germany the city and district of Suwalki. The line continued along the East Prussian frontier to Ostro/eka, then southeast to the Bug River, along the Bug via Brest (Brest-Litovsk) to Krystynopol', a town north of L'vov, and then almost due west to the San River, which it followed to its source on the border of Ruthenia. 34/ In October 1939, the USSR ceded to Lithuania the disputed territory At the Yalta Conference in February 1945, the Big Three of Wilno.*

At the Yalta Conference in February 1945, the Big Three (Roosevelt, Churchill, and Stalin) agreed that Poland's eastern boundary should be moved westward from its prewar line to the old Curzon Line of 1919, with some digressions in favor of Poland. 35/ For this loss of territory to the USSR, Poland was to be compensated at the expense of Germany. At the Potsdam Conference (2 August 1945) the Big Three agreed to terms whereby Poland lost approximately 70,000 square miles of its prewar territory in the east to the USSR and received provisionally about 40,000 square miles in the west from the former German provinces of Silesia, Pomerania, and East and West Prussia. The northern part of East Prussia was placed under Soviet administration and the southern part under Polish administration. The agreement 36/ stated that --

^{*}This area was later incorporated into the USSR as part of the Lithuanian SSR.

pending the final determination of territorial questions at the peace settlement the section of the western frontier of Soviet Socialist Republics which is adjacent to the Baltic Sea should pass from a point on the eastern shore of the Bay of Danzig to the east north of Braunsberg-Goldap (Braniewo-Go/dap), to the meeting point of the frontiers of Lithuania and East Prussia.

Regarding Poland's western frontier and southern East Prussia it was stated that --

pending the final determination of Poland's western frontiers the former German territories east of a line running from the Baltic Sea immediately west of Swinemunde (Swinioujscie), and thence along the Oder River to the confluence of the western Neisse River and along the western Neisse to the Czechoslovak frontier, including that portion of East Prussia not placed under the administration of the Union of Soviet Socialist Republics in accordance with the understanding reached at this conference and including the area of the former free City of Danzig, shall be under the administration of the Polish State.

On 16 August 1945 Poland and the USSR concluded at Moscow a treaty on the Polish-Soviet frontier, as well as an agreement on the question of compensation for damages caused by the German occupation. The new state border as described in this treaty followed the Curzon Line and the westernmost of its southern extensions through former Eastern Galicia with the exception of a few deviations of 5 to 30 kilometers (3 to 18.5 miles) each. The principal deviations were in the vicinity of Grodno and Przemyśl, where they were in favor of the Soviet Union, and in the Jalowka-Niemirow sector and the area along the Western Bug and Solokija Rivers south of the town of Krylow, where they were in favor of Poland. 37, 38/ Northeast of Suwa/ki the new line corresponded with the prewar Polish-Lithuanian boundary. The treaty further stated that, pending a final peace conference, in conformity with the decisions of the Potsdam Conference part of the Polish-Soviet frontier adjoining the Baltic Sea was to pass from the Bay of Danzig eastward, north of the cities of Braniewo and Goldap, to the point where the Polish, Lithuanian, and East Prussian boundaries met. Article 2 of the treaty provided for a Mixed Polish-Soviet Commission for the demarcation of the frontier, with headquarters in Warsaw. Upon completion of its work in the field, the members of the Commission signed the delimitation documents on 30 April 1947.

The Polish-Soviet border as delimited by the treaty of 16 August 1945 was slightly altered by an agreement signed in Moscow on 15 February 1951-by Poland and the Soviet Union, which resulted in the mutual exchange of 480 square kilometers (185.3 square miles) of territory between the two nations. Poland acquired a strip of land near the southernmost section of the Polish-Soviet frontier at a point where the San River had been the boundary, including the town of Ustrzyki Dolne. The USSR, in turn, received an area of land along the Sololija and Bug Rivers to the west of the town of Sokal. 39, 40, 41, 42/ Two agreements were signed by representatives of Poland and the USSR in Moscow 8 July 1948, one of which established the principles to be applied in marking the boundary and the other the organizations and procedures for boundary administration. An agreement was signed on 8 December 1951 modifying the 1948 agreements in order to conform to the situation created by the two border rectifications of that year (see accompanying maps 12698, 12926, and 12757). 43, 44 45, 56/

B. Linear Description of the Boundary

1. Kaliningrad Oblast and Lithuanian Sector*

The boundary between Poland (Polish-administered East Prussia) and Kaliningrad Oblast (Soviet-administered East Prussia) begins on the Baltic shore of the sand spit, Mierzeja Wislana (Frische Nehrung) (see accompanying map 12698). The line crosses this sand spit in a straight northwest-southeast line, touching the eastern shore at a point about 3 kilometers (1.8 miles) north of the Polish settlement of Nowa Karczma (Neukrug) (Braunsberg; J-14: 10-34).**
At the eastern shore of the sand spit, the boundary turns to east-southeast and crosses the lagoon Zalew Wislany (Frisches Haff) in a straight line.

The boundary intersects the mainland at a point about 2 kilometers (1.2 miles) northeast of the Polish settlement of Pas/eka

^{*}In the description of this sector of the Polish border, the place-name forms are, wherever possible, those used on the side of the border on which the place or feature is located. For many places on the Soviet side, however, the Russian name is not available, and in such cases the Polish name, if known, is given, followed by the old German name in parentheses. If only the German name is known, it is given in parentheses.

^{**}Locational indices for places in the entire Polish border area refer to AMS Series M651, Poland 1:100,000. For an explanation of the key, see footnote, page 8.

(Passarge)* (J-14: 20-33) and just north of the mouth of a small stream that runs northeast of and parallels the stream Pas/eka (Passarge). The boundary continues overland, crossing the stream Omaza about 4 kilometers (2.5 miles) northwest of the Polish settlement Zelazna Gora (Eisenberg) (J-14: 38-29). In the section from the coast to the Omaza, the boundary is crossed by the Braniewo (Braunsberg)-Kaliningrad (Königsberg) railroad, the Braniewo-Kaliningrad main road, and a secondary road leading from the Polish settlement of Lipovina (Lindenau) (J-14: 33-24). The boundary also crosses the stream Bahnau and for a short distance parallels the Mamonovo** (Heiligenbeil)-Tsinten (Zinten) railroad. It is probable that very little traffic circulates across the border over any of the routes discussed. The following boundary crossings are given in west-to-east order:

- (1) A road crosses from Zelazna Gora to Mamonovo.
- (2) The main road (a former <u>Reichsautobahn</u>) from the west to Kaliningrad crosses at a point southwest of the Soviet settlement Tyrowo (Thierau) (J-14: 40-33).
- (3) The Omaza River loops northward near Tyrowo, crossing the boundary three times.
- (4) A road from the Polish settlement of Jachowo (Hanswalde) (J-14: 43-28) crosses to Tyrowo and Mamonovo.
- (5) Two small streams cross the boundary south of the Soviet settlement (Hermsdorf) (J-14: 46-33).
- (6) South of Tsinten (J-14: 54-35) the boundary passes just south of the junction point of two railroads -- one from the southwest, from the Polish city of Orneta, the other from the southeast, from Lidzbark Warmiński; from the junction point the railroad runs north to Tsinten.

^{*}If the policy of evacuating the population for a considerable depth on either side of the boundary has been carried out along the Polish-Soviet frontier, as has been done along some other Soviet frontiers, it is possible that many of the settlements or villages mentioned in this description may now be uninhabited. Since March 1953, however, the Ukrainian authorities have launched a large-scale compulsory resettlement program in the former Polish-Soviet frontier area.

^{**}Mamonovo is the most recent Soviet name for this town. In the earlier years of Soviet occupation, the Soviet name appeared as Kheyligenbeyl.

(7) The main Orneta-Tsinten road crosses the border just east of the Orneta-Tsinten railroad.

In the sector from the coast to the vicinity of Tsinten, the boundary traverses low, open country with only a few scattered patches of woodland. Many small streams and, near the coast, small canals or ditches cross the boundary. Before the boundary was established (1945-46), there were about 10 small settlements in the border area, and houses and buildings were distributed with fair uniformity. The border zone here and elsewhere along the Polish-Soviet boundary is probably almost uninhabited at present, and it is possible that many of the buildings that were near the line have been removed.

From the road and railroad crossings south of Tsinten, the boundary line continues in a generally west-east direction. It extends for about 23 kilometers (14 miles) to a point some 3 kilometers (1.8 miles) south of the Soviet town Bagrationovsk (Pr Eylau) (Konigsberg; J-15: 77-28). In this section, the following roads cross the boundary:

- (1) A road from the Polish settlement Kandyty (Canditten) (J-15: 58-20) to Tsinten, a branch of which leads east to the Soviet settlement Rassiten (Rositten) (J-15: 62-29).
- (2) Several secondary roads in the Kamiensko Forest (Forst Preussisch Eylau) sector, through which the boundary runs for about 5 kilometers (3 miles) in the area southeast of Rassiten.
- (3) The Olsztyn-Kaliningrad main road, which crosses the boundary southwest of Bagrationovsk.

The terrain is considerably more rolling and broken in this sector than to the east. The Kamiensko Forest occupies high ground east of Bagrationovsk, and another large forested tract, apparently a detached part of the Kamiensko Forest, is on the Polish side of the boundary a short distance south of Bagrationovsk. Prewar settlement in this sector was not quite as dense as to the east, although there were many buildings some distance to the north and south of the immediate border zone.

The boundary continues eastward for about 16 kilometers (nearly 10 miles), crossing the Bartozyce (Bartenstein)-Keliningrad main road and railroad. It intersects the Bartozyce-Pravdinsk (Friedland) railroad and main road near the settlement of Shënbrukh (Schönbruch) (J-15: 92-25). From south of Shënbrukh the boundary runs eastward for about 27 kilometers (16.7 miles) and intersects the Olsztyn-

Chernyakhovsk railroad and the Olsztyn-Znamensk main road about 4 kilometers (2.5 miles) south of the Soviet town of Zheleznodorozhnyy (Gerdauen) (J-15: 19-24). In this sector the line crosses the Lyna (Alle) River about 9 kilometers (5.6 miles) east of Shënbrukh. The Polish settlement Lipowo (Lindenau) (J-15: 06-22) lies near the boundary about 5 kilometers (3 miles) east of the Lyna. From the road and railroad intersections south of Zheleznodorozhnyy, the boundary continues in an easterly direction to the town of Nordenbork (Nordenburg) (Insterburg; J-16: 35-22), which appears to be on the Soviet side of the boundary.

The boundary sector from Shënbrukh to Nordenbork traverses undulating, open land interspersed with small patches of woodland. A fairly large woodland area lies on the Soviet side northwest of Nordenbork. There were a number of small settlements near this sector of the boundary in the prewar period.

From Nordenbork the boundary approximates a straight line bearing slightly north of east to the northern end of the (Goldaper See), about 5 kilometers north of Goldap. In this long sector there are now no sizable towns near the boundary, though there were many small settlements in the prewar period. West of Nordenbork the boundary crosses the Kanal-Mazurski, which, with its extensions, connects lake Rydzowskie in Poland with the Lyna River in Soviet territory. On the AMS 1:100,000 series this canal is not shown as crossing the boundary. The boundary crosses the Wegorapa (Angerapp) River about 8 kilometers (nearly 5 miles) south of the Soviet town of Ozersk (Darkehmen) (J-16: 65-31).

Between Nordenbork and Go/dap the major road and railroad crossings are as follows:

- (1) Wegorzewo-Zheleznodorozhnyy railroad crossing, about 4 kilometers (2.5 miles) east of Nordenbork;
- (2) Wegorzewo-Zheleznodorozhnyy main road crossing at Rauschenfeld (Reuschenfeld) (J-16: 41-22);
- (3) Wegorzewo-Ozersk (Darkehmen) railroad crossing (J-16: 55-23);
 - (4) Goldap-Ozersk main road crossing (J-16: 75-24);
- (5) Go/dap-Ozersk railroad crossing, east of the main road crossing;

- (6) Go/dap-Gusev (Gumbinnen) main road crossing about 2 kilometers (1.2 miles) southeast of the Soviet settlement Plawiszki (Plawischken);
- (7) Go/dap-Nesterov (Stalluponen) railroad crossing, just west of the northern end of the Goldaper See.

From Nordenbork to the Goldaper See the boundary traverses only a few small areas of woodland, mainly in the vicinity of Kowary (Kowarren). There are nearby woodland tracts of considerable size, however, one in Poland south of Nordenbork and the lake Jezioro Nordenborskie (Nordenburger See), and a second, also in Poland, south of the place where the Wegorapa River crosses the line. The terrain is irregular, and local elevations are fairly high. The boundary passes over high ground east of Nordenbork, descends to the valley of the Wegorapa, then climbs to the highest elevation in this sector, about 180 meters (590 feet), near the Goldaper See.

From the Goldaper See, the boundary extends eastward through a forested area, the Puszcza Romincka (Romintener Heide), for about 23 kilometers (14 miles) to the vicinity of the Polish settlement of Zytkiejmy (Szittkehmen) (Kalvarija; J-17: 10-25). A branch line of the Goldap-Nesterov railroad crosses the boundary just west of Zytkiejmy. The boundary apparently follows almost a straight course through the forest, slightly north of east. For about 7 kilometers (4.3 miles) in the central part of the forest, it parallels a road called the Goldaper-Teerbuden Weg on the AMS 1:100,000 series. In the western part of the Puszcza Romincka Forest, the boundary is crossed by several small streams, and there are a few settlements and some cleared land in this area. From the vicinity of Zytkiemy to the beginning of the Lithuanian boundary the terrain is open and irregular. Outside Zytkiemy and two other smaller settlements, scattered houses and buildings are rather evenly spaced.

From Zytkiemy the boundary extends for about 7 kilómeters in an east-northeast direction to the point where it meets the Kaliningrad Oblast-Lithuanian SSR boundary, about 3 kilometers (1.8 miles) southeast of the lake J. Wisztynieckie (Wystiter See) and 5 kilometers (3 miles) west of the Polish settlement of Wizajny (J-17: 21-27). From this junction point the Lithuanian boundary trends northeast for approximately 4 kilometers (2.5 miles), then curves around the northern end of Lake Wizajny and continues in a direction slightly south of east for about 7 kilometers (4.3 miles). The Lithuanian settlement of Grafauskai (J-17: 26-32) lies north of the boundary in this section. The boundary turns southwest for roughly 3 kilometers, then southeast for about 5 kilometers, passing south of the Lithuanian settlement of Liubavas (J-17: 32-28). In this section the line is crossed by the

river Sheshupe and by a secondary road leading from the Polish settlement Rutkatartak (J-17: 28-23) to Liubavas.

In the sector from the trijunction of Poland, Kaliningrad Oblast, and Lithuania to the Sheshupe there is considerable high ground. Some of the small streams that cross the boundary have rather steep-sided valleys, several of which are drained by chains of small lakes connected by creeks. There is marshy ground to the north-northwest of Jez Wizajny and along the Sheshupe. On the Soviet side immediately adjacent to the boundary are several fairly large patches of forest. Between two of these, the boundary skirts the southern shore of the small lake Dunajewo (J-17: 20-33). Settlement and buildings were rather uniformly dispersed in this sector before the war, Liubavas containing the only sizable cluster of buildings. A network of secondary roads crossed the boundary, and there were apparently open fields in several places along the border.

From the Sheshupe, the boundary parallels the stream Szelmentka, a tributary of the Sheshupe, southwestward to the northern end of Lake Kupowo, passing to the northeast of a forest tract. The line then trends southeast for about 4 kilometers (2.5 miles), then curves northeastward for about the same distance; in this section it crosses the Suwalki-Kalvariya main road. The line runs southward for about 2 kilometers (1.2 miles), then turns east near the settlement of Trompole (J-17: 42-20), which it apparently passes through. Thence it extends in a direction slightly south of east for 2 kilometers, then southeast for about 5 kilometers (3 miles). In this section, at a point some 4 kilometers northeast of the Polish settlement of Puńsk (J-17: 42-16), it intersects the railroad from Suwalki to Maryampole and Alitus.

The boundary follows a slightly curving course eastward to Berezniki (J-17: 50-16), passes through this settlement, and crosses a secondary road to the Polish town Sejny (Druskieniki; K-18: 53-99) from Kalvariya. From Berezniki, the boundary follows an irregular course in a general southeasterly direction to the northern shore of Lake Ga/adus, where a road crosses from Poland to the Lithuanian town of Lazdiyai (K-18: 64-14). The boundary continues southward through Lake Ga/adus for about 6 kilometers (3.7 miles), roughly half the length of the lake.

The stream Szelmentka and the lake Kupowo, like the streams to the northwest, are in an entrenched valley. After traversing this valley, the boundary passes onto an upland of irregular topography. There are some marshy areas near the line, and a small lake lies in an angle of the boundary near the Lithuanian settlement of Trompole. Several small tributaries of the Sheshupe drainage system flow across

the line into Lithuania, and the boundary passes through or near a series of small lakes before reaching Lake Galadus. As in the area to the northeast, buildings were rather evenly distributed in the prewar period and there was a dense network of secondary roads, many of which crossed the boundary.

From Lake Ga/adus, the boundary turns eastward on land and intersects a secondary road leading from Sejny to Lazdiyai. From the point where it crosses this road, the line curves to the south-southeast then southeast, passing southwest of the Lithuanian settlement Janoslavas (K-18: 62-07). The Sejny-Lazdiyai main road crosses the boundary a short distance northeast of a small lake, Hozny, on the Polish side. The boundary continues in a general southerly direction, and after crossing the small lake Bo/oni it intersects the Suwa/ki-Alitus main road east of the Polish settlement Berzniki (K-18: 61-97).

The irregular terrain characteristic of the boundary zone northwest of Lake Ga/adus continues southeast of that lake to the vicinity of the Lithuanian settlement Kučiūnai (K-18: 64-02), south of which elevations are lower and the surface is smoother. Southeast of Lake Ga/adus the prewar buildings were grouped more definitely into settlements than to the northwest.

From the intersection with the Suwa/ki-Alitus road, the boundary extends southwestward through a forested area for about 8 kilometers (5 miles) along a secondary road running south from the Lithuanian settlement Klepočiai (K-18: 69-02). In this forested tract the boundary is crossed by a road extending southeastward from Sejny by way of Berzniki in Poland to Kapčiamiestis (K-18: 74-88) in Lithuania.

The boundary meets the Marycha River at a point some 4 kilometers (2.5 miles) southeast of the Polish settlement Zelwa (K-18: 60-91) and follows the course of the Marycha for about 7 kilometers (4.3 miles) to the point of junction of the boundaries of Poland, the Lithuanian SSR, and the Belorussian SSR, southwest of the Lithuanian settlement of Grickavas (K-18: 68-85). In this sector the land is cleared, and in prewar times buildings were spaced rather closely along both banks of the river, but on both the Polish and Lithuanian sides extensive forested tracts lie within a short distance of the stream. On the Polish side these tracts are part of the large forest, Puszcza Augustowska. The valley of the Marycha, where the boundary follows it, and the areas to the east and west are fairly flat and at lower elevations than the boundary zone to the north.

2. Belorussian Sector*

The sector of the boundary between Poland and Belorussia may be divided into two parts. The longer northern section extends across land or along small streams from the point of junction of the territories of Poland, the Lithuanian SSR, and the Belorussian SSR to the Bug River. The second, or southern, section follows the Bug to the point where the Belorussian-Ukrainian boundary intersects the Polish boundary (see accompanying map 12926).

The Polish-Belorussian border extends from the trijunction of the boundaries of Poland, Lithuania, and Belorussia in a southerly direction, bearing slightly to the east, to a point on the Kanal Augustowski northeast of the Polish settlement of Rudawka (K-18: 65-73). In this sector, the boundary traverses a forested area interspersed with clearings. The line continues in a southeasterly direction along the Kanal Augustowski to its junction with the stream Wo/kuszanka, which the boundary then follows for roughly 4 kilometers (2.5 miles). Continuing southward over land, the boundary passes to the west of the Soviet settlement of Ho/ynka (K-18: 70-63). Near this village the line bends to the southeast, passes to the east of the Polish settlement of Rakowicze (Grodno; L-18: 69-59), and again turns southward. After crossing the Augustów-Grodno highway, the boundary bears to the southeast, traversing the swampy area along the stream Popilja.

From this area the boundary continues its southeasterly course in an approximately straight line for about 20 kilometers (12 miles) to the vicinity of the Polish settlement of Kuźnica (L-19: 75-34). From north to south in this sector, the line intersects the Augustow-Grodno railroad, the Dabrowa-Grodno main road, the Sokoźka-Grodno railroad, and the Sokoźka-Grodno main road. The Augustów-Grodno railroad is crossed by the boundary at a point between the Bielany railroad station (L-18: 71-48), which is in Poland, and the settlement of the same name, which is in the USSR. The Sokoźka-Grodno railroad extends north from Kuźnica for a short distance before crossing into the USSR. In the vicinity of the boundary the railway parallels the stream Zosośna /Lososna/.

From near Kuźnica to about 33 kilometers (20.5 miles) southeast, near the Swis Locz Svisloch' Stream, the boundary again approximates a straight line, passing to the east of the Polish settlements of

^{*}In the descriptions of the Belorussian and Ukrainian sectors of the Polish border, the place names used are those appearing on AMS Series M651, Poland 1:100,000. For places on the Soviet side, the Russian forms are given in brackets wherever possible, and alternate names are in parentheses.

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Nowodziel (L-18: 77-30), Minkowce (L-18: 82-18), and Krynki (L-18: 84-06). Several secondary roads from the Polish side of the line converge on the Soviet settlement Odelsk /Odel'sk/ (L-18: 83-22). Opposite Krynki, on the Soviet side of the boundary is Porzecze (L-18: 89-06). From a point south and east of Krynki the boundary turns southeastward, crossing first the Nietupa, a tributary of the Swis/ocz, and then the Swis/ocz itself. Between the two streams the ground is swampy.

The boundary follows the Swis/ocz southward (upstream) through swampy terrain for some distance. On the Polish side in this sector are the settlements of Ozierany Wielkie (Swis/ocz; M-18: 90-00), Bobrowniki (M-18: 93-91), and Swis/oczany (M-18: 92-86); on the Soviet side is the settlement Ho/ynka and /Golynka/ (M-18: 94-97). Between Bobrowniki and Swis/oczany the boundary stream is crossed by the main road and the railroad between Bia/ystok and Volkovysk.

The Swis/ocz rises in Soviet territory and flows first to the southwest, then makes a sharp turn to the northwest. At the turning point the boundary leaves the stream and continues in a generally southerly direction to the Hajnówka-Volkovysk railroad (M-18: 97-72), passing to the east of the Polish settlement Ja/owka (M-18: 95-78) and intersecting the railroad southwest of the Soviet settlement Niezbodzicze /Nezbodichi/ (M-18: 99-74). The boundary parallels the railroad for a short distance in a southwesterly direction, then turns south, crossing the Ko/onna Stream and the marshy ground along it.

From the Kolonna area, the boundary enters the Bialowieska Forest, through which for a considerable distance it trends southward and southwestward. It crosses an area of cleared land within the forest around the Polish settlement of Masiewo (M-18: 96-58), then continues southward to a point east of the Polish settlement Bia/owieza (Hajnówka; N-18: 93-44). Here it takes a general southwesterly course, passing to the south of Bialowieza. For a short distance the boundary follows the Perewoloka, a tributary of the Lesna Stream, and then turns briefly to the northwest along the Lesna. On leaving this stream the boundary curves in a southwesterly direction, emerging from the main part of the Bia Zowieska Forest some distance to the north of the Soviet settlement of Omelaniec Omelenets (N-18: 73-25). Within the forest the boundary is crossed by several narrow-gauge or tramway tracks, probably built for logging purposes. These lines radiate out from the vicinity of the Polish settlements of Bialowieza and Hajnówka (N-18: 74-48) to points on the Soviet side of the boundary.

On leaving the Bia lowieska Forest the boundary continues to curve in a southwesterly direction. In this sector the line passes

to the east or southeast of the Polish settlements of Czeremcha (N-18: 59-22), Klukowicze (Siemiatycze; N-17: 54-10), and Niemirów (N-17: 47-96). Another settlement, Tokary (N-17: 52-06), lies across the boundary but probably mainly on the Polish side. On the Soviet side in this sector are the settlements of Omelaniec, Buszmicze Bushmichi (N-18: 68-21), and Hola Golya (N-18: 60-16). The railway between Bielsk-Podlaski and Wysokie Litewskie Tysoko-Litovsk and the main road between Kleszczele and Wysokie Litewskie cross the boundary northwest of Hola.

The southern section of the Belorussian border begins east of Niemirów, where the boundary joins the Bug River. The boundary in the Bug is now defined as following the middle of the stream, without reference to the main or navigable channel (thalweg). In many instances the middle or median line in the central section of the river differs from the central line of the main channel. The allocation of river islands presumably does not differ greatly from that agreed upon in 1939-40 between Germany and the Soviet Union. The Soviet Union probably retains most of the islands assigned to it in the 1939-40 boundary agreements, and Poland probably holds most of the islands then assigned to Germany. The principal road and railroad crossings over the Bug River from Niemirów south to the Ukrainian border are as follows:

- (1) Road crossing on the Janów Podlaski-Kobrin route (Braześć nad Bugiem; P-18: 70-85).
- (2) One road and one railroad crossing at Brest, on the Bia/a Podlaska-Kobrin route (P-18: 81-75).
 - (3) Possibly a minor road crossing at Koden (P-18: 80-56).
- (4) Crossing by a road running eastward from Radzyn Podlaski to the north-south road paralleling the Bug on the Soviet side (P-18: 79-40).
- (5) Road crossing at W/odawa on the Che/m-Kobrin route (W/odawa; Q-18: 78-16).
- (6) Railroad crossing at Orchowo Orkhovo (Q-18: 81-14) on the Che/m-Brest railway.

At the time of the 1939-40 boundary survey, apparently the only bridges across the Bug on these routes that had not been removed or destroyed were the railroad bridge at Brest and the road bridge at Koden.

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3. Ukrainian Sector

The boundary between the Ukrainian SSR and the Belorussian SSR joins the Polish-Soviet border on the Bug River several kilometers southeast of the Soviet town of Orchowo, to the southeast of Wiodawa (see accompanying maps 12926 and 12757). From this point, the Polish-Ukrainian boundary continues to follow the Bug River generally southward to a point southeast of the Polish town of Krylow (Sokal; S-18: 92-20), a distance of approximately 169 kilometers (about 105 miles). In this sector (Figure 24), the boundary passes through a region predominantly of swamp or marshland. To the west of the border are the Polish settlements of Sobibór (Q-18: 83-08), Zbereze (Q-18: 87-00), Wölka-Uhruska (Q-18: 83-90), Dubienka (W/odzimierz; R-18: 03-61), and Horod/o (R-18: 92-44). On the Soviet side_lie the settlements of Opalin (Q-18: 89-87) and Uscilug /Ustilug/ (R-18: 99-40). Numerous paths and cart tracks parallel the river on both sides of the boundary, and a minor road crosses the area east of Dubienka. The principal road and railroad crossings of the Bug River from Wiodawa southward to where the boundary leaves the river southeast of Ho/ubie (S-18: 93-15) are (1) a main road between Hrubieszów and Wiodzimierz /Vladimir-Volynskiy/, crossing at Uści/ug, and (2) a railroad crossing on the Zamość-Włodzimierz route (R-18: 08-32).

The boundary leaves the Bug at a point southeast of Ho/ubie* where the generally north-flowing river makes a wide bend, then continues southward over land for roughly 7.5 kilometers (about 4.7 miles). It passes to the east of the Polish settlement of Honiatyn (S-18: 93-07), near which the line turns to the southwest for approximately 19 kilometers (11.8 miles) to a point south of Oserdów (S-18: 12-92), where it turns due west. In this sector the border cuts across patches of woodland and is intersected by many paths.

Continuing a westerly course, then bearing to the southwest, the boundary crosses the Rzeezyca (Swynoryja) Stream and parallels the Rawa Ruska Ruskaya-Krystynopol Krystynopol' railroad, which is on the Soviet side. Southeast of the Polish settlement of Nowosio/ki-Przednie (S-18: 90-86) the border approximates a straight line to the south for about 5 kilometers (3 miles), passing the Polish towns of Wolka-Wierzbicka (S-18: 91-84) and Wierzbica (S-18: 90-82). In this area the tributaries of the So/okija cross the border in a region of considerable marsh and swampland.

^{*}The boundary line south of Ho/ubie is described according to available documents, protocols, and small-scale maps.

After turning again in a southwesterly direction, the boundary crosses the Szczebrzeszyn-Rawa Ruska rail line (S-18: 86-76), passes to the east of the Polish settlement Hrebenne (S-18: 84-75), and intersects the main road between Tomaszow Lubelski and Rawa Ruska (S-18: 84-74). South of Hrebenne the boundary cuts across a wooded area, the Rata River (a tributary of the Bug), and the Lubaczów-Rawa Ruska rail line (Lwow; T-18: 80-70). From the vicinity of the railroad southwest for about 19 kilometers (11.8 miles) to a short distance south of the small stream Smolinka, the boundary again approximates a straight line. After crossing a wooded area interspersed with clearings, a small stream, and a secondary road in the vicinity of the Polish village Budomierz (Przemyśl; T-17: 64-54 purple*), the boundary curves in a southwesterly then southerly direction. Turning southwestward again east of the Polish settlement of Zmijowska (T-17: 58-47 purple), the border crosses the Szklo (T-17: 80-69 red) and the Wisznia (T-17: 72-60 red), tributaries of the San River, and passes to the east or southeast of the Polish settlements Budzyn (T-17: 79-69 red), Zapust (T-17: 75-64 red), and Medyka (T-17: 63-51 red) to a point east of the Polish village of Siedliska (T-17: 59-47 red). On the Soviet_side of the boundary in this sector are the settlements Gnojnice Gnoenyetz! (T-17: 78-66 red), Zahorby (T-17: 72-60 red), and Bucow \overline{B} ukov/ (T-17: 67-54 red); the settlement Starzawa /Staryava/ (T-17: 71-59 red) is on the border but mainly in Soviet territory. The railway and main road between Przemyśl and Lwów /L'vov/ cross the boundary east and south of Medyka.

From Siedliska the border goes to the south as far as a point east of Pod Luczycami (Sambor; U-17: 56-45), where it again takes a southwesterly course to a peak (elevation about 2,000 feet) southeast of the Polish settlement Jureczkowa (U-17: 37-23).** In this area the boundary twice crosses the Wiar Stream, a tributary of the San River, at points northeast and southwest of the Soviet town of Nizankowice /Nizhankovichi/ (U-17: 53-38). It also intersects numerous paths and the railroad and main road between Przemyśl and Chyrów /Khyrov/ (U-17: 53-40). A number of linear settlements built along streams cross the border in this sector.

^{*}Since on the AMS 1:100,000 series the Russian Belt 4 Grid (purple) and the Danube Zone Grid (red) overlap in this area, the color of the grid system used is specified.

^{**}The boundary line in the Jureczkowa area is described according to available documents, protocols, and small-scale maps.

From the forested peak southeast of Jureczkowa, the boundary makes a sharp V-shaped turn and extends in a southeasterly direction for approximately 7.5 kilometers (about 4.7 miles), intersecting the Ustrzyki Dln (Dolne)-Chyrów railroad and main road northwest of the Soviet village Smolnica (U-17: 45-16). The boundary then continues in a general southerly direction, curving slightly, to a point east of the Polish settlement of Michniowiec (U-17: 44-96). In this sector the border crosses numerous streams and passes through scattered forest areas at elevations from 2,000 to 3,500 feet.

From a point south of the vicinity of Michniowiec the boundary meets the San River (Turka; V-17: 42-87), which it follows, first southeast then bending sharply northwest, to the point that marked the beginning of the former boundary between Poland and Czechoslovakia in the Beskid Range (V-17: 52-63). The Soviet settlement of UŽok (Uzhok) is located in this area (Figure 25). The line then extends along the old border to Kremenec* (V-17: 30-74), which now forms the trijunction of the frontiers of Poland, the Ukrainian SSR, and Czechoslovakia.

C. Boundary Marking, Administration, and Security

1. East Prussia Sector

According to the available Polish-Soviet agreements, the boundary between Kaliningrad Oblast, RSFSR, and the Polish-administered portion of East Prussia has not been further defined since the Polish-Soviet Treaty of 16 August 1945, and no formal provision has been made for its administration and demarcation. The ostensible reason for this is that this segment of boundary is considered provisional until a peace treaty with Germany is concluded. It is probable, however, that this segment has been demarcated and provision made for its administration without the pertinent documents having become available.

Very little imformation is at hand on the marking of the boundary between Kaliningrad Oblast and Poland. In 1947, the Polish and Soviet sections of East Prussia were reportedly separated by a border zone about 10 kilometers wide from which the population had been evacuated and in which no farming was permitted. The frontier itself is completely closed and is patrolled by guards on both sides. A barbed-wire fence apparently extends along the entire length of the frontier; in 1952 the fence was reported to be equipped with flares,

^{*}In documents on the Polish-Soviet frontier, the Polish spelling "Krzemieniec" and the Russian spelling "Kremenetz" (or "Kremenets") are also used.

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which a touch on the connecting wires would set off. It is likely that barbed-wire entanglements also are present along all or most of the border. Possibly these frontier barriers constitute the only marking of the boundary.

A description of the barriers at an important railroad crossing point between Poland and Kaliningrad Oblast illustrates the extreme security measures used along the border. In 1951 the following successive zones were reported at Zheleznodorozhnyy (Gerdauen): first, farthest from the boundary line itself, a cleared area about 300 meters (984.25 feet) wide; then, nearer the boundary, a plowed strip 10 to 15 meters (32.8 to 49.2 feet) wide, in which wooden watchtowers with searchlights were located at 300- to 400-meter (about 984to 1,312-foot) intervals; next, a barrier 2 meters (6.5 feet) high of barbed-wire rolls and barbed wire strung on crosspieces; and finally, 3 to 5 meters (9.8 to 16.4 feet) nearer the line, a high barbed-wire fence strung on wooden poles. Watchtowers with searchlights are probably spaced along the whole boundary, since they appear to be a standard security feature of the Polish-Soviet frontier. The stretch of the boundary in the lagoon Zalew Wislamy is marked by buoys and is reported to be lighted at night by searchlights from towers on the sand spit Mierzeja Wislana and on the mainland.

2. Sectors South of East Prussia

The agreements of 1948 and 1951 establish procedures for the settlement of disputes and conflicts that might arise along the line, and for the general administration of the boundary, for the sectors from the junction point of the Polish, former East Prussian, and Soviet territories southward to the junction of the Polish-Soviet boundary with the Czechoslovakian boundary. This entire stretch of boundary is divided into five Polish and five Soviet sectors, each under the charge of a boundary commissioner who is responsible for its administration. Each sector bears the name of the town where its headquarters are located. From north to south the sectors on the Polish side are:

- (1) Sejny sector, extending the length of the Polish-Lithuanian SSR boundary.
- (2) Bia Lystok sector, extending from the junction point of the Polish, Lithuanian, and Belorussian boundaries southward to the point where the boundary joins the Bug River near Niemirow.
- (3) Terespol sector, from Niemirów southward along the Bug to Orchowo.

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- (4) Che Im sector, from Orchowo southeast of Wiodawa (boundary marker No. 1122) to the point at which the Jaros Iaw-Rawa Ruska railway (marker No. 673) crosses the boundary.
- (5) Rzeszow sector, extending from the Jaros Zaw-Rawa Ruska railway to the junction of the Soviet, Polish, and Czecho-slovakian frontiers (Kremenec), with headquarters in the city of Przemyśl.

Administration of the boundary is designed to discourage intercourse across the line. Apparently no provisions are made for regular circulation from one side of the boundary to the other by inhabitants of the border region in the course of their normal occupations, as is done along many western European and New World boundaries. The boundary waters are open to navigation by both Polish and Soviet vessels and to timber floating by the nationals of both states, according to the stated provisions of the agreements, but navigation is permitted only in the daytime. Vessels of one state may put in at the bank of the other state only if they are in distress.

Agreements provide for local border crossing by only a few classes of individuals. These include, among others, the boundary commissioners and their subordinates in the course of their official duties and the laborers engaged in construction of installations connected with timber floating or in clearing the banks of logs. Notice of persons crossing the border must be given in advance to officials of the other state. Nationals of either state may fish in the boundary waters up to the boundary line on their side, but only in the daytime. Shooting and pursuit of game across the line is prohibited. Provision is made for the return by boundary officials of persons who may accidentally stray across the line. Generally, in mineralized areas, mining and mineral prospecting is prohibited in strips of land 20 meters wide adjacent to the boundary.

The basic agreements of 1948 state that commerce by railroads, main roads, and waterways intersected by the boundary line, and frontier transit points on such routes, are to be subject to special agreements between Poland and the USSR. At such transit points, where a major transportation route crosses the boundary, each state is required to erect and maintain proper signs and barriers. It is agreed that should the whole boundary or sections of it be closed to traffic, the border-crossing privileges of the boundary officials shall be suspended. It is therefore possible that even the limited border intercourse permitted under the agreements of 1948 and 1951 may be inoperative in whole or in part.

The course of the land boundary along the Polish-Soviet frontier is indicated by a cleared strip totaling 10 meters in width, 5 meters on each side of the line. Provision is made in the Polish-Soviet agreement of 1948 for keeping the border strip in proper condition and cleared of thickets and other undergrowth interfering with visibility. Care of the frontier strip on its own side of the line is the responsibility of each state. Cultivation and the construction of buildings for any purpose except defense are prohibited in the boundary strip. Along the boundary line a series of markers, numbered in consecutive order from south to north, has been erected.

On land, the boundary is delimited by these markers and is defined as an immovable line running from one marker to the next. These markers consist of two wooden posts, probably about the height of a man, placed 2.5 meters from the frontier line, with a small round wooden post or four-sided stone post between them on the line itself. At principal turning points, a concrete pillar is placed on the line between the usual two wooden posts. At points of crossing from land to water or water to land, two wooden frontier posts and a small wooden post or concrete pillar are placed on one bank of the river or lake, with a third post on the opposite bank in alignment with the frontier line.

Along water sectors, boundary markers consist of two wooden posts placed on opposite sides of the stream or lake. On navigable rivers (except the Bug, as explained earlier) the frontier line is defined as following the thalweg (middle of the main channel). On unnavigable rivers the frontier follows the middle of the stream or the middle of its main branch. Natural changes in the bed of a boundary stream that would involve shifts in ownership of property or buildings do not change the position of the boundary line except by special agreement. The boundary line divides bridges, dikes, and sluices, placing one half in Poland and the other half in the Soviet Union, regardless of the location of the line in the water.

The frontier markers are numbered in order from south to north. The first marker is in the Beskid Range at Kremenec, the trijunction of the frontiers of Poland, the USSR, and Czechoslovakia. The approximate locations of other known boundary markers are as follows: marker No. 350, on or near the bank of the San River, south of the Ukrainian settlement Zurawin Zhuravna; markers Nos. 432-A and 472, between 3 and 4 kilometers (about 1.9 and 2.5 miles) east of the Polish settlement Jureczkowa; marker No. 673, near the place where the Jaros aw-Rawa Ruska railway crosses the boundary; marker No. 700, south or southeast of the Polish town Wierzbica; markers Nos. 859-A and 860, on or near the bank of the Bug River where it

intersects the boundary south of the Polish town Kry/ow; marker No. 1122, near the Belorussian settlement Orchowo; marker No. 1345, near the Polish town Niemirów; marker No. 1788, at the point where the boundary meets the Marycha River, at or near the junction of the territories of Poland, Lithuania, and Belorussia; and marker No. 1987, near Gromadczyzna, at the convergence of the boundaries of Poland, the Lithuanian SSR, and Kaliningrad Oblast. Gromadczyzna appears on the AMS 1:100,000 series in the German form, Gromadtschisna. In the prewar period, Gromadczyzna was a small cluster of buildings immediately on the boundary between Lithuania, East Prussia, and Poland.

The border between Poland and the USSR is the most heavily guarded section of the Polish boundary line. It has been reported that along the entire border is a continuous line of barbed-wire entanglements 2.5 to 3 meters (8.2 to 9.8 feet) high and broadened at the top to increase the difficulty of crossing. On the Polish side of the frontier, watchtowers have been erected every 2 kilometers (about 1.2 miles). The Polish border police maintain posts 20 kilometers (12.4 miles) apart all along the boundary.

On the Soviet side, much stricter measures have been taken. In order to make the frontier impenetrable, the Soviets have divided the border area into three zones. The first zone (that farthest from the frontier) reaches from 80 kilometers (about 49.7 miles) in the interior to a point 15 kilometers (about 9.3 miles) from the boundary line. In this zone, the population is kept under rigid control by restrictive measures. Departures or arrivals in this area can be made only with proper authorization, and all inhabitants are provided with temporary passports, which are marked and numbered. The second zone extends from the periphery of zone 1 to a point 800 meters (about half a mile) from the border. This sector is under approximately the same strict control as the first, with, in addition, an established system of outposts manned by frontier guards. In this area there are also numerous "observation points" equipped with machine guns, telephones, and radios, some of which are surrounded by a system of defensive dugouts. The third zone, also about 800 meters wide, includes the frontier itself and is entirely depopulated. The ground has been completely leveled and cleared of trees. Watchtowers stand about half a kilometer (1,640 feet) apart on the Soviet side. Running parallel to the barbed-wire entanglements that extend along the boundary is a belt of plowed land about 15 meters (49 feet) wide, which is under constant surveillance for footprints. In addition to these security measures a variety of alarm devices, some of which release flares upon contact, have been installed as added precautions. Moreover, the border area is patrolled regularly by guards with trained dogs. There is believed to be a line of

fortifications, the so-called Stalin defense line, on the Soviet side of the border. A line of fixed heavy-concrete gun emplacements has been observed between the city of Brest and the boundary.

D. Maps of the Boundary

Probably the most authoritative and legible map source for the Polish-Soviet boundary available in this country, aside from a few medium- and small-scale Soviet maps, is the 1:500,000 Mapa Polski (1, in list at end of section). The linear description of the boundary given in this report is based on that map, but it is also keyed to the Army Map Service series Poland 1:100,000 (2), although the latter does not show the present boundary line. A more recent German map of the East Prussian sector (3), based on sources available in Western Germany, shows the line in a rather generalized manner but differing in only a few details from that on the Mapa Polski.

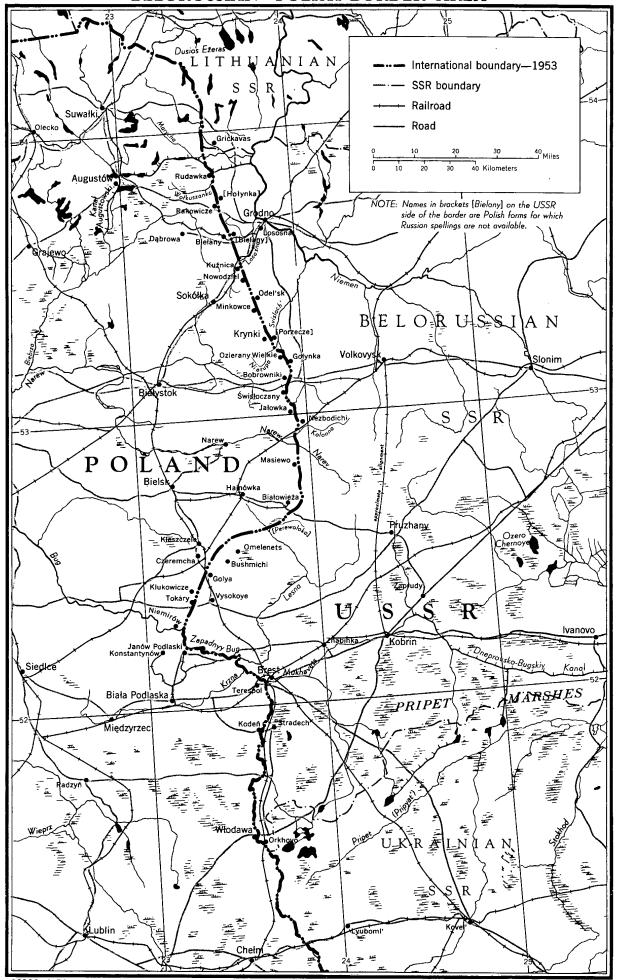
In the Lithuanian SSR sector, the boundary apparently has been altered only slightly from the prewar line between Poland and Lithuania as shown on the AMS 1:100,000 series. The source of that line is a 1:100,000 series of the Polish Military Geographic Institute dated 1929 and 1931.

The position of the boundary along the Bug River from Niemirów southward to the vicinity of Kry/ow and along the upper San River at the extreme southern end of the line corresponds with that of the Ribbentrop-Molotov line between the German and Soviet conquests in 1939. A set of 1939-40 boundary-demarcation maps of this line (4), at the scales of 1:5,000 and 1:25,000, is available, but the boundary markers and numbers shown are out of date. The extent to which the boundary in the Bug River as shown on these maps differs from the present line is not known, but presumably the difference is not great.

The text of the Polish-Soviet agreement regarding the exchange of territories signed 15 February 1951 and the accompanying map at scale of 1:1,000,000 (both enclosed with a Foreign Service despatch from Warsaw) provide information on the rectified sections of the boundary.

- 1. <u>Mapa Polski</u>; 1:500,000; Wojskowy Institut Geograficzny (Polish Military Geographic Institute); 1947.
- 2. <u>Poland 1:100,000</u>; Army Map Service Series M651 (GSGS \(\dagger 4416); 1944; AMS Library Call No. 55M 23-30-90,000-100.

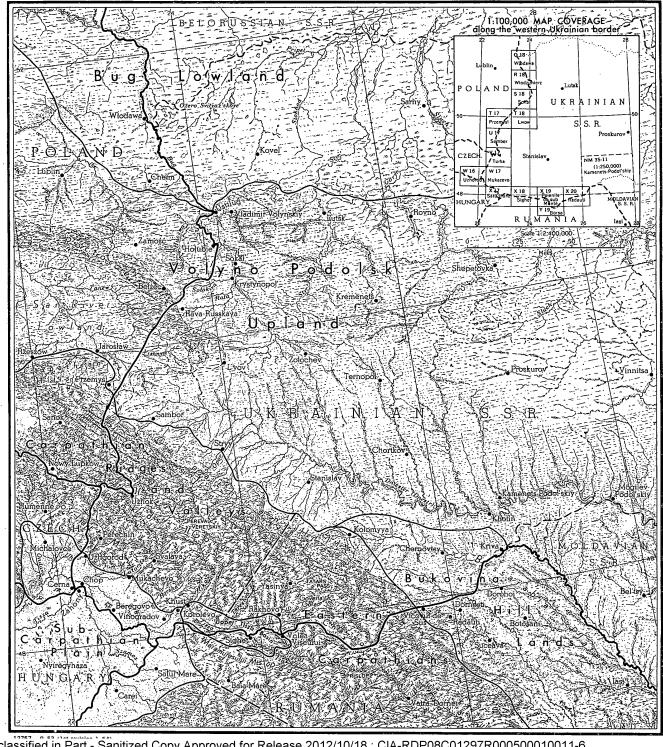
- 3. <u>Karte des Verlaufs der polnisch-sowjetischen</u> . <u>Verwaltungsgrenze in Ostpreussen</u> (Map of the Course of the Polish-Soviet Administrative Boundary in East Prussia); 1:300,000; Bundesanstalt für Landeskunde; Remagen, 1953.
- 4. Karten der Staats- und Interessengrenze des Deutschen Reiches und der Staatsgrenze der Union der Sozialistischen Sowjetrepubliken vom Grenzzeichen Nr. I/l bis zum Grenzzeichen im Dreiort
 Deutsches Reich-Union dSSR-Ungarn (1939-1940) (Maps of the State and
 Sphere-of-Influence Boundary of Germany and of the State Boundary of
 the Union of Soviet Socialist Republics from Boundary Marker No. I/l
 to the Boundary Marker at the Tripoint of Germany, the USSR, and
 Hungary, 1939-1940); 1:5,000 and 1:25,000; Die Gemischte Zentralkommission des Deutschen Reiches und der Union dSSR für Grenzfragen
 (Mixed German-Soviet Boundary Commission); 1939-40.



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WESTERN UKRAINIAN BORDERLAND



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IV. Czechoslovakia and Hungary-USSR Border

A. History of the Boundary

The Czechoslovak Republic that came into existence on 28 October 1918 was confirmed by the Treaty of Saint-Germain-en-Laye of 10 September 1919 47/ and was formally recognized by the Allied and Associated Powers. The new state comprised the five provinces of Bohemia, Moravia, Austrian Silesia, Slovakia, and Ruthenia. Ruthenia, which along with Slovakia formerly belonged to Hungary, was incorporated into the Republic as an autonomous territory in order to provide Czechoslovakia with a natural boundary in the east (the Carpathian Mountains). Most of the inhabitants of Ruthenia were similar in many respects to the Ukrainians of southeastern Poland and the Soviet Union, but there were Hungarians also in the southern part.

On 29 September 1938, 20 years after its formation, the Czechoslovak Republic was dismembered by Hitler in accordance with the Munich Agreement signed by Great Britain, France, Italy, and Germany. Germany was ceded the Sudetenland plus additional small scattered areas, and Poland demanded and received Teschen (October 1938). By the Vienna Award of 2 November 1938, Hungary was assigned the southern portions of Ruthenia and Slovakia. In Ruthenia the new boundary extended in a northwest-southeast direction to the south of Uzhgorod, in general separating the plain of the Tissa* River to the south, where the Hungarians were concentrated, from the Carpathian Highlands to the north. On 14 March 1939, the German-sponsored government of Slovakia proclaimed the territory an independent state. On 15 March, German troops occupied what was left of Czecho-Slovakia, (as the name of the dismembered republic was now spelled), and the next day Czechia (Bohemia plus Moravia) was declared a German protectorate and incorporated into the Third Reich. Meanwhile, Hungarian troops marched into the northern part of Ruthenia, which was formally annexed by Hungary on 16 March, giving Hungary a common frontier with Poland.

After Germany's defeat in May 1945, the Czechoslovak Republic was reborn and the territories seized by Germany, Poland, and Hungary were returned to Czech sovereignty by June 1945. As a result of negotiations, a treaty was concluded in Moscow on 29 June 1945 between the Czechoslovak Republic and the USSR for the incorporation of Ruthenia (the Subcarpathian Ukraine) into the Soviet Union. 48/ This

^{*&}quot;Tisa" is the Czech form, "Tisza" the Hungarian, and "Tissa" the Russian form of the name of this river. All three forms are used in the report.

treaty provided that the frontiers existing between Slovakia and the Subcarpathian Ukraine as of 29 September 1938 (the pre-Munich eastern boundary of Slovakia as part of Czechoslovakia) were to become, with some alterations, the boundaries between Czechoslovakia and the USSR. In 1946 the Mixed Czechoslovak-Soviet Commission for the demarcation of the frontier concluded its work and defined the boundary in general terms (see accompanying map 12757). The Commission's definition of the boundary, which is 115 kilometers (71.4 miles) long, reads in part as follows --

from the Polish frontiers in the north it retains the old Slovak Subcarpatho-Russian regional boundary to the south as far as the Vysne Nemecke Plain. From here the frontier turns west and runs between the villages of Sahor and Bozos. It continues behind the commune of Pinkovce, which belongs to Czechoslovakia, and turns right to the commune of Lakard /Lekart/.

The fate of this latter village remained in doubt until the Soviet Union agreed to allow the boundary to pass to the east and southeast within 1 kilometer of Lekart, leaving the town and its territory on the Czech side. 49, 50/

The Hungarian Armistice signed on 20 January 1945 provided that the boundaries of Hungary as they existed on 1 January 1938 should be restored. This provision was confirmed by the Hungarian Peace Treaty of 10 February 1947, with the exception that the so-called Bratislava bridgehead opposite the city of Bratislava was ceded to Czechoslovakia. With Ruthenia ceded to the USSR, the frontier that from 1919 to 1938 was the boundary between Czechoslovakia and Hungary 51/ became the Hungarian-Ruthenian (USSR) boundary (map 12757).

B. Linear Description of the Boundary*

From the convergence of the Czech, Soviet, and Polish boundaries at Kremenec (Turka; V-17: 30-74),** the Czech-Soviet boundary dips

^{*}Place names in this section are those appearing on AMS Series M651, Poland 1:100,000, and M671, Middle Danube 1:100,000. Russian forms, where known, follow in brackets, and alternate names are given in parentheses.

^{**}Turka (V-17) is a sheet of AMS Series M651; all other sheets referred to in this section are of AMS Series M671. For explanation of locational key, see footnote, p. 8.

slightly to the southwest before turning due south for approximately 5.6 kilometers (about 3.5 miles). This area is heavily wooded and contains few settlements. Southeast of the Czech village of Nová Sedlica (V-17: 26-69), the boundary curves before taking a southwesterly course that approximates a straight line for roughly 8.5 kilometers (about 5.2 miles). Southeast of Berezovec, a Czech village (V-17: 16-58), the boundary again takes a southerly direction, crossing a metaled road between the Czech settlement of Ublá (V-17: 16-54) and M Berezný, a Soviet settlement southeast of Ublá. Beyond the intersection the boundary turns west for a short distance. On the Soviet side in this sector the Uh / Uzh River and the railway and main road between Vel' Berezny / Velikiy Bereznyy (V-17: 20-52) and Perečin / Perechin / (Mukacevo; W-17: 19-35) roughly parallel one another in a south-southeast direction.

East of the Czech village of Dubrava (V-17: 13-52) the line continues in a generally southward course, through predominantly forested mountains (Popričný Peak) (V-17: 12-41), for about 22.5 kilometers (roughly 14 miles) to Cervená hora (W-17: 10-31) northeast of Uzhorod / Uzhorod / (Uzhorod; W-16: 07-24) at which point it again turns in a southwesterly direction and crosses the main road between Sobrance and Užhorod at the site of the Czech village of Vyš Nemecké (Vyš-Německe) (W-16: 04-28). A few kilometers to the southwest the Jankovce-Užhorod road is intersected. South and west of Vyš Nemecké the border passes to the east of the Czech settlements of Záhor (W-16: 99-25), Pinkovce (W-16: 98-23), which is east of the commune of Lekart, and Matóvce (W-16: 94-19). At Pinkovce the line crosses the Uh River.

Southeast of the Czech village of Matovce the boundary continues in a southerly direction to a point where it intersects the Vel' Kapušany (Nagy-Kapos)-Užhorod railway and road (W-16: 95-18). About 3.5 kilometers (2.2 miles) due south, another road is crossed between Ruská and Surty (Szürte), west of the Soviet settlement of Palad' Komárovce /Komoroc/ (W-16: 96-14). From here the line dips slightly to the southwest and then turns southward again, bisecting the settlement of Vel' (Nagy)-M(Kis)-Slemence (Male Slementse) (W-16: 94-12).

From the vicinity of Vel'-M-Slemence the boundary follows a southwesterly course approximating a straight line for roughly 9.6 kilometers (about 6 miles). In this lowland area the border intersects the Latorica (Latoritsa) River after crossing a tributary, the Szirin, southeast of the Czech settlement of Ptruksa (Ptruksa). In this sector a number of minor roads and cart tracks cross the boundary. East of the Czech village of Cerná (W-16: 90-04) the railroad and main road between Satoraljaujhely (Sátoraljaújhely) and Cop Chop intersect the line. South of this point the boundary turns

due east for about 1 kilometer, at which point it meets the Tisa River, where the borders of Czechoslovakia, Hungary, and the Ukrainian SSR meet (W-16: 94-00).

The boundary between Hungary and the USSR follows the Tisa to a point south of the Soviet village of Saloka (W-16: 01-96), where it leaves the river and turns eastward along the old border. In this area a railroad and a road cross the border in a north-south direction to the west of Cop (W-16: 97-03). To the north of this sector lies an area of swamp forest. The line continues in an easterly direction for roughly 5 kilometers (about 3 miles) until it meets the Caronda Stream, a tributary of the Latorica River; it then bears in a south-southeasterly direction. East of the Hungarian village of Kisderenyo (Satu Mare; X-17: 08-81) the boundary makes a V-shaped bend, then extends in a northeasterly direction for about 1 kilometer, at which point it turns eastward. To the north of the border on the Soviet side lies the settlement of Kosino (Kosini) (W-17: 15-82); to the south on the Hungarian side is Barabas (X-17: 12-80). This entire sector is characterized by patches of woodland and brushwood interspersed with marsh areas. From east of Kosino the boundary extends in an irregular southeasterly course, intersecting the Beregsurany-Berehovo (Beregovo) main road (X-17: 22-71) and skirting the Kis erdö (forest) to the east. As in the area to the northwest, there is a dense network of secondary roads, many of which cross the boundary.

East of the Hungarian settlement of Tarpa (X-17: 19-65) the border turns and runs in a general easterly direction to the Tisa River (X-17: 25-64), then follows the river through lowland characteristic of this stretch of the border. South of the Soviet settlement of Výlok / [Vylok] (X-17: 41-63) the boundary leaves the Tisa and follows a tributary, the Batár, to a point east of the Hungarian village of Magostiget (X-17: 43-57). The railroad and main road between Berehovo and Výlok skirt the eastern reaches of the Tisa along this section of the border; a branch of the road intersects the boundary south of the river.

After leaving the Batar Stream, the border extends south-southwestward through continued lowland until meeting the Túr, another tributary of the Tisa. It turns in a southeasterly direction along the Túr, crosses a road, and follows the course of the stream to the point where the Hungarian, Rumanian, and Ukrainian SSR frontiers meet east of Nagy erdö (forest) (X-17: 43-47).

C. Boundary Marking, Administration, and Security

The Czech-Soviet border is indicated on the ground by a cleared strip, usually 10 meters wide but 20 meters in some places. The cleared area is especially evident in mountainous and wooded areas. Provision is made for keeping the border strip clear of growth at all times. Paralleling the cleared strip on the Czech side is a zone of impenetrable growth. Presumably, all roads and highways within 200 meters (656 feet) of the boundary not actually used as border crossings or necessary to forestry and agriculture have been destroyed. Hunting grounds near the border area continue under the control of the forestry service and are nonleasable.

Observations along the frontier of Czechoslovakia indicate that the boundary is marked by small red-white-and-blue posts. On the USSR side the border posts are solid red. Boundary markers are probably spaced similarly to those along the Polish frontier, although no definite information is available.

It is known that the frontier between Hungary and the USSR has been demarcated and that a boundary regime has been agreed upon, but the details of these agreements are not available.

In 1948 and 1949 a Joint Soviet-Hungarian Frontier Commission redemarcated the line in accordance with the terms of the 1947 Peace Treaty with Hungary. The protocol resulting from this demarcation, along with maps and other documents, was signed in Moscow on 30 July 1949. 52,53/ This protocol presumably reestablished border markings to conform to those set up at the time of the Treaty of Trianon after World War I. A treaty on the regime for the frontier and a convention on the method of settling frontier conflicts and incidents were signed in Moscow on 24 February 1950. The provisions of these agreements on boundary administration are not known.

The method of boundary marking probably is similar to that described for the Polish frontier, consisting of numbered border posts. The white stone markers mentioned in the 1948 description of security zones have probably been replaced by new boundary markers.

Soviet border posts are closely spaced along the Czech-Soviet frontier. Two command posts for the sector of the border situated west and south of Drohobycz (Drogobych) are located at Turka and Ustrzyki-Dolne. Subordinate patrol posts are at Sianki, Beniowa, Buczkarnia, Lutowiska, Tarnawa, Lokiec, Dydiowa, Pohary, Boberka, Zurawin, Smolnik, and Chmiel. The number of border troops stationed at these posts ranges from 10 to 15 men at Zurawin to approximately

250-at Sianki. Situated between the border posts are border defense points manned by 3 or 4 men. Reportedly, these defense points are located in well-concealed bunkers on tops of hills and are spaced about 2 kilometers (1.2 miles) apart. The typical layout at these points is a one-story wooden building for housing the troops, surrounded by a circular trench connected with the building by arterial trenches. Each defense point is equipped with machine guns, pistols, rockets, flares, and telephones.

Behind the frontier area on the Soviet side is a plowed and raked strip approximately 50 feet wide. High wooden guard towers about half a mile apart, equipped with revolving searchlights, are visible in the vicinity of Cierna-nad-Tisou. On the Czech side, a number of wooden towers 20 to 25 meters (66 to 77 feet) high are located very close to the border at intervals of 400 to 500 meters (1,320 to 1,650 feet) and are occupied by guards at all times. (Figure 26.)

An elaborate system of border security is maintained along the Hungarian-Soviet border (Figure 27). According to a report from the Mukačevo district, there are eight parallel security areas on the Soviet side, beginning at the border and running eastward. The border itself is marked by a series of white stones approximately 400 meters (1,312 feet) apart. A clearing about 50 meters (164 feet) wide next to the border is bounded on the east by a barbed-wire fence about 2 meters (6.5 feet) high, surmounted by two electrically charged copper wires. A second zone about 200 meters (656 feet) wide lies east of the fence and consists largely of marshland. In this zone an alarm wire, which releases rockets when tripped, runs close to the ground and is difficult to detect. The third area is an artificial swamp, about 300 meters (984 feet) wide, through which runs a zigzag strip of dry, carefully raked earth. The fourth area eastward is a plowed and raked strip also about 300 meters wide. The fifth area, a cleared path about 2 meters wide, is patrolled by pairs of Soviet frontier guards, who are often accompanied by trained dogs. The sixth zone, about 500 meters (1,640 feet) wide, is in uninhabited, swampy terrain and has wooden observation towers about 6 meters high spaced at approximately 500-meter intervals.

To the east of the six narrow zones lie two other security areas of greater depth. The first of these, called the Number 1 Zone or "Forbidden Zone," is about 2 kilometers (1.25 miles) deep. The inhabitants of this zone are handpicked Communists, and their identification documents are printed with a large figure 1. There are additional observation towers in this zone. The Number 2 Zone, or "Restricted Zone," which lies further east, is 32 kilometers (about 20 miles) deep. Only Communists and politically trusted

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peasants, who often serve as informers, are allowed to live in this zone. Their documents bear a large figure 2 for identification purposes.

Soviet troops in the border area are carefully picked and well trained. They are organized into sections (Otdels) and detachments (Otriads), which in turn are designated by numbers and code names. A detachment varies in strength from 500 to 1,000 or more men depending on local requirements. These frontier units are responsible for security along assigned border areas and are equipped with horses, motorcycles, automobiles, and light patrol planes. The section commander is responsible for the collection of information along the adjoining border strip as well as for the security of his frontier section.

D. Maps of the Boundary

The postwar boundary between Czechoslovakia and the USSR, as delimited by a treaty of 29 June 1945 and later approved by the Mixed Czechoslovak-Soviet Commission for the demarcation of the border, is shown on a State Department map (1, in list below). Other maps showing this boundary are listed as (2) and (3).

The present boundary between Hungary and the USSR corresponds to the prewar Hungarian-Czech border (in the Subcarpathian Ruthenia area). A Joint Soviet-Hungarian Frontier Commission redemarcated the border in accordance with the 1947 Peace Treaty with Hungary. The principal source for this line is the Hungarian 1:75,000 series (4).

The linear description of the boundary as given in this report is based on the maps mentioned and, except for the Czechoslovak section, on AMS Series M671 (5).

- 1. Provisional Boundary Between Czechoslovakia and USSR; 1:222,500; Division of Map Intelligence and Cartography, Department of State; 1946.
- 2. Czechoslovakia: Užhorod and Mukačevo; 1:200,000; /Czech Zeměměřický Uřad v. Praze (Survey Office, Prague); 1945.
- 3. Mapy Krajov. Kraj Košický A Kraj Prešovaký (Maps of the Krays. Košice Kray and Prešov Kray); 1:200,000; /Czech/Zéměměřický Úřad v. Praze (Survey Office, Prague); Sheets Nos. 18 and 19, 1949.

- 4. Hungary; 1:75,000; Magyar Királyi Állami Térképészeti Intézet (Hungarian State Cartographic Institute); Sheets 4668, 4669, 4769, 4770, and 4870, 1925-41.
- 5. <u>Middle Danube 1:100,000</u>; Army Map Service Series M671 (GSGS 4416); Sheets W-16, W-17, X-17, X-18, X-19, Y-19, and X-20, 1944; AMS Library Call No. 7M 23-30-90,000-100.

V. Rumania-USSR Border

A. History of the Boundary

The boundary separating Rumania and the Soviet Union has fluctuated considerably during the last century and a half. The area between the Prut and Dnestr Rivers formerly known as Bessarabia (now comprising the major portion of the Moldavian SSR), has changed hands in whole or in part several times. The population in this area included Rumanians, Ukrainians, Jews, Russians, Bulgarians, and Germans. In the period between the two World Wars, Rumanians (Moldavians) comprised about 50 percent and Ukrainians about 20 percent of the population of Bessarabia.

After changing hands several times between the Turks and the Russians, Bessarabia fell once more to Russia in 1812, and the boundary between Russia and the Ottoman Empire was placed along the Prut and the lower Danube Rivers, in practically the same location as the present line. In 1829 the Russians obtained possession of the Danube Delta, but as a result of the Crimean War in 1856 they were pushed back to a line in southern Bessarabia considerably north of the Danube. The strip of southern Bessarabia from which they withdrew became part of Moldavia, which, together with Wallachia, was recognized as an autonomous principality under the Ottoman Empire. By the Treaty of Berlin in 1878 Rumania became independent and secured possession of the Danube Delta and the Dobruja area, while Russia again annexed the southern strip of Bessarabia. 54/
The boundary between Rumania and Russia was thus restored to its 1812 position, which is approximately its present location.

After World War I and the Russian Revolution, the National Council of Bessarabia declared the province independent of Russia and later approved its annexation to Rumania. Great Britain, France, Italy, and Japan recognized this act in 1920, 55/ but the United States did not. The USSR also refused to recognize the incorporation of Bessarabia into Rumania, and for many years the frontier between the two countries, along the Dnestr River, was closed. Bucovina, which had been part of Austria-Hungary, was also ceded to Rumania after World War I.

On 26 June 1940, the Soviet Union presented Rumania with an ultimatum demanding the return of Bessarabia and northern Bucovina. Rumania, powerless to resist Soviet claims, was forced to cede these territories, totaling about 21,000 square miles, to the USSR (Soviet-Rumanian Agreement, 28 June 1940). 56/

In June 1941, when the Germans invaded the USSR they were aided by Rumanian troops, and the territories of Bessarabia and northern Bucovina were temporarily reannexed by Rumania. In October 1941, Odessa and Transnistria (an area beyond the Dnestr) were brought under Rumanian administration. However, by March 1944 the Soviet armies had recaptured the greater part of this territory, and by that summer Rumania accepted the armistice agreement offered by the USSR (representing the Allies). Article 4 of the armistice signed . on 12 September 1944 reaffirmed the Soviet-Rumanian boundary of 1940. 57/ Rumania's retrocession of Bessarabia and northern Bucovina to the Soviet Union as provided by the armistice was confirmed by the Rumanian Peace Treaty signed at Paris 10 February 1947. Thus the Rumanian-Soviet boundary was once again placed along the Prut and lower Danube. Delimitation of the frontier was carried out by the two countries in 1949 (see accompanying maps 12757 and 12904). A protocol (including maps and other documents) describing the exact line was concluded, but the terms were not revealed.

B. Linear Description of the Boundary

The frontier between Rumania and the USSR may be divided into two sectors for purposes of description. The northern sector extends from the trijunction of the Hungarian, Rumanian, and Soviet borders to the Moldavian boundary (map 12757), and the southern sector extends along the Prut and lower Danube Rivers to the Black Sea (map 12904).

1. From the Trijunction of the Hungarian, Rumanian, and Soviet Boundaries to the Moldavian Boundary*

The western part of this border is the former frontier between Rumania and Czechoslovakia. From the trijunction point east of Nagy erdö (Satu Mare; X-17: 43-47)** the boundary follows the Tur River to a point south of the Soviet village of Fertešalmaš (X-17: 47-49). Leaving the river, the line extends in a northeasterly direction for about 1 kilometer (0.62 mile) and then turns sharply northward, forming an elbow south of the forested area of All erdö (X-17: 47-55).

^{*}Place names in the description of this sector of the Rumanian border are those appearing on the AMS Series M671, Middle Danube 1:100,000, and N501, Eastern Europe 1:250,000. For places on the Soviet side, the Russian forms are given in brackets wherever possible. Alternate names are in parentheses.

^{**}Locational indices for places named in this sector refer to AMS Series M671 except for the final 8-mile stretch, which is covered on Sheet NM 35-11 of AMS Series N501. For explanation of locational key, see footnote on p. 8.

The border then takes an east-southeasterly course, intersecting the Satu Mare-Chust /Khust/ railroad and main road (X-17: 52-50). In this sector many secondary roads branch off from the principal highway, each with different termini. To the east of the railroad crossing, the boundary dips to the southeast before continuing in an easterly direction along the Egersky Kanal. After following the same general course for several kilometers the boundary turns abruptly to the northeast, passing through an area interspersed with woodland. Throughout this section a network of minor roads and a number of streams cross or approach the frontier. To the east of the line, on the Rumanian side, the settlement pattern is dense, although it is possible that in the postwar years many of the villages in the border zone have been evacuated. The boundary then continues in an irregular northeasterly direction to a point west and north of the Rumanian village of Bocicău (X-17: 64-60). In this general sector the Satu Mare-Chust railroad on the Soviet side and a main road on the Rumanian side parallel the border.

From the vicinity of Bocicău the line makes a broad, irregular, north-south loop, then straightens out and takes a southeasterly direction for about 4.5 kilometers (2.8 miles). The highest elevation in the area (2,600-2,700 feet) is in this sector. South of Frasin (X-17: 73-61) the boundary makes another loop to the north and traverses a heavily forested tract, resuming a general southeasterly course for roughly 30 kilometers (about 19 miles) to a point less than 2 kilometers (about 1 mile) southeast of Polan (Sighet; X-18: 88-46). The border than turns in a northeasterly direction, which it follows until it meets the Tisa (X-18: 92-50). The boundary follows the river to a point south of the Soviet village of Trebuštany (X-18: 39-38), a stretch of about 60 kilometers (37 miles). In this sector the railroad between Tačovo /Tyachev/ (X-18: 95-49) on the Soviet side (Figure 28) and Sighet (X-18: 18-38) on the Rumanian side crosses the border southeast of the Soviet settlement of Teresva /Tereshva/ (X-18: 07-46).* From Sighet the railroad parallels the boundary to the point where the frontier leaves the river and continues overland (X-18: 39-36). On each side of the border a main road, from which a number of secondary roads and cart tracks radiate, closely parallels the boundary. The road to the north, between Tacovo and Trebustany, passes through the Soviet villages of Bedevla /Bedevlya (X-18: 02-48), Teresva (X-18: 04-47), Slatin Doly, Selo Slatina (X-18: 17-40,** and

^{*}A new rail line, not shown on AMS Series M671, has been constructed along the north bank of the Tisa River from a point 1.7 miles east of Teresva to the village of Slatin Doly (X-18: 16-41).

^{**}In aerial photos of the area the settlements of Slatin Doly and Selo Slatina appear as one.

Vel Bočkov (X-18: 28-42). The road to the south passes through the Rumanian settlements of Săpănta (X-18: 04-43) and Sighet and intersects the border about 10 kilometers (6 miles) to the east of the latter. Numerous tributaries of the Tisa enter the river from both sides of the boundary. Throughout this sector the line traverses an area interspersed with woodland and brushwood.

From the point southwest of Trebuštany (X-18: 39-38) where it quits the Tisa, the boundary continues in an east-southeasterly direction to the ridge (peak) Vf Muncel (X-18: 42-33), and then follows an east-northeasterly course to Pop Ivan Pop Ivanu (X-18: 50-36), on the western approaches of the Eastern Carpathians. From here the border makes a dip along the Capul Grosilor ridge, then goes in an east-northeasterly then irregular easterly direction, reaching higher elevations along the ridges of the Gory Czywczyńskie (Poienile de sub Munte; X-19: 70-39). In this heavily forested section numerous paths cross the border. West of the wooded area of Copilasul (X-19; 71-37) a main road connects with the Rumanian settlement Poienile de sub Munte (X-19: 59-24). Several kilometers east of Copilasul the boundary begins in a south-southeasterly trend, continuing for roughly 41.5 kilometers (about 26 miles) to a point south of Hniatiasa (Borsa; Y-19: 91-13). From here the line curves to the east and then gradually assumes an east-northeasterly course approximating a straight line for about 12 kilometers (approximately 7.5 miles). This entire section of the border area is densely forested. In the vicinity of a hill, D Cozarca (Y-19: 05-13), the boundary turns in a northeasterly direction, following and then paralleling the Cobilora Stream (a tributary of the Suceava River) for a few kilometers before intersecting a secondary road and another tributary of the Suceava east of the Soviet village Sipotele Sucevei (Shepit) (X-19: 12-18). Northeast of this settlement the border follows the Suceava River to a point south of the Soviet settlement of Seletin /Selyatin / (X-19: 17-27). From Sipotele Sucevei to Seletin a spur railroad track parallels the boundary. The border then follows the bend of the Suceava to a point south of D lui Mortun (X-19: 21-30), where it crosses the river and the Seletin-Rădăuți road and railroad (X-19: 21-29).

From the vicinity of D lui Mortun the boundary goes in a straight line in a northeasterly direction for about 3 kilometers (approximately 1.9 miles). It turns due east for a short distance, then east-northeast, following a course approximating a straight line for some 19.5 kilometers (about 12.1 miles) to a point northwest of the Rumanian settlement of Vicovul de Sus (Vicovu de Sus) (Radauți; X-20: 48-31). In this sector the border crosses numerous paths and the Sadea, Ciumarnarului, Falcau, Falcheutu, and Rostoaca Streams, tributaries of the Suceava River. South of Dealul Basului (hill) (X-20: 45-33),

the boundary extends in a northeasterly direction intersecting the Storojinet /Storozhinets/-Rădăuți main road (X-20: 47-33) before turning eastward. Continuing along the same course, the boundary follows two tributaries of the Suceava (the Bilca de Sus and the Bilca Micā), intersects the road between Pătrăuții de Jos (on the Soviet side) and Vicovul de Jos (on the Rumanian side) (X-20: 54-32), and extends in a southeasterly direction for about 4 kilometers (2.5 miles). In this area the line crosses a number of minor roads and another tributary of the Suceava River, the Par Bilka. To the east of the stream the border turns to the northeast for several kilometers, intersecting the Patrautii de Jos-Fratautii road (X-20: 60-33) and the Petriminiasa Stream. It then skirts the edge of a wooded area, turns more to the east of north and then east-southeast for a short distance to a point south of the Soviet village of Fântâna Albă (X-20: 67-36). In this entire sector the boundary follows the drainage system of the Suceava. The Seletin-Rădăuți railway and road roughly parallel the border to the south, traversing a thickly settled area.

Southeast of Fantana Alba a road connecting that settlement with the Rumanian village of Climauti (X-20: 70-34) crosses the border. A few kilometers to the east the boundary turns in a southeasterly direction and then extends east-northeast in a straight line for 8.2 kilometers (about 5 miles). Along this stretch of the border the line intersects the Volcinet /Volchinets/-Dornesti railroad (X-20: 73-35), the road between Volcinet and Siret (X-20: 77-36), and the Siretul (Siret) River. Northeast of the river a railroad and road between Storojinet and Siret and the principal road between Cernauti /Chernovtsy/ and Mihaileni (X-20: 80-37) cross the boundary. From this point the line goes in an easterly direction, intersecting a branch road northwest of the Rumanian settlement of Mihaileni and crossing the Molnita, a tributary of the Siretul. Several kilometers to the east of Molnita the border turns to the northeast and passes through a wooded area interspersed with clearings. Throughout the whole sector numerous secondary and minor roads crisscross the frontier. Southwest of D Curmaturei (X-20: 93-43) the border bends slightly to the northwest, crosses the P Jijia Stream, and then turns northeasterly again, extending in a straight line for some 8.7 kilometers (about 5.4 miles). In this area the Herta /Gertsa/-Dorohoi main road crosses the boundary (X-20: 97-49). Northeast of the road intersection the border passes through a woodland, leaving the village of Fundu Herta (X-20: 98-50) on the Rumanian side. The boundary then enters a clearing, crosses a number of secondary roads and an unnamed stream, and enters another wooded area at a point near D Corhana (X-20: 01-54). From here the boundary curves in a northerly direction for about 3.7 kilometers (approximately 2.3 miles) until it reaches the Prutul (Prut) River (X-20: 01-58). From the vicinity

of the Soviet village of Tarasauts' (Kamenets-Podol'skiy; NM 35-11: 130-85) the boundary follows the Prut River for roughly 13 kilometers (about 8 miles) to a point south of the Soviet settlement of Kishla Saliyeva (NM 35-11: 132-86), where the frontiers of Rumania, the Ukrainian SSR, and the Moldavian SSR meet.

2. The Boundary Along the Prut and Lower Danube Rivers*

Lack of precise information on the delimitation of the boundary along the Prut and lower Danube Rivers leaves some question as to its exact course. In the Prut sector, the boundary line is difficult to determine because of the meandering course of the river and the possibility of frequent cut-offs, as well as the presence of a number of fluvial islands.

The most difficult area in which to determine the exact course of the boundary, however, is the Danube Delta. Here the line presumably follows the Kilia, the northernmost arm of the Danube, and it is so shown on recent small-scale maps. Along the Kilia Arm there is some question as to the course of the boundary in two areas. The boundary as shown deviates from the Kilia Arm and passes to the south of three islands -- Salangic, Dalerul Mic, and Dalerul Mare -located about midway between Izmail and Kiliya. At the mouth of the Kilia Arm on the Black Sea, the boundary is shown as following the Stari Stambul Arm, which lies to the east of Musura Island and the Musura Arm. The position of the boundary in relation to the three islands in the Kilia Arm and the Musura Arm and Island was a matter of considerable concern to the Rumanians in the negotiations preceding the peace treaty. The final outcome of the discussions is not known. 58/ The boundary as here described corresponds with that on the Soviet map which served as the primary source.

Although the line along the Kilia Arm must be regarded as the official boundary, there is a strong possibility that the USSR has taken over territory to the south and that the de facto limit of Soviet control may lie along the Sulina Arm (the main channel of navigation) or even farther south. 59,60/ The presence of Soviet

^{*}In the description of this sector of the Rumanian border, the place names given are, wherever possible, those used on the side of the border on which the place or feature is located; Russian names are followed in parentheses by the old Rumanian names as they appear on sheets of Rumanian 1:100,000, a German reprint of a Rumanian map series. Locational indices refer to that series.

watchtowers along the northern bank of the Sulina Channel is one indication that actual control may be exercised by the USSR at least as far south as the Sulina. 61/

The boundary between Rumania and the Moldavian SSR begins on the Prut at a point about 1 kilometer west of the Soviet settlement Kriva (Criva) (Cernăuți; 4085: 670-865). This point marks the junction of the administrative boundary between Rumania and the USSR formed by the Prut. The boundary follows the Prut from here to its confluence with the Danube.

From Kriva to the Rumanian settlement Rădăuți (Rădăuți; 4585: 680-860), about 10 kilometers east of Kriva, the river flows in a generally easterly direction, but with several northward loops. The Soviet settlement Lipkany (Lipcani-Târg) (4585: 685-865) lies just north of the river, opposite Radauti. From Radauti and Lipkany the Prut flows in a general southeasterly direction toward the town Ştefaneşti (Stefanestii) (Botoşani; 4580: 715-810), which lies on the Rumánian side some 4 kilométers from the river. In this sector the boundary passes through a densely inhabited area. The Soviet settlements Pereryta (Pererita) (4585: 690-855), Tetskany (Tetcani) (4585: 695-855), Lopatnik (Lópatnic) (4585; 700-850), Viishora (Viisoara) (4580: 700-845), Badrazh Staryy (Badragii Vechi) (4580: 705-840), Korpach (Corpaci) (4580: 710-835), Staryy Kukoneshty (Cuconestii Vechi) (4580: 710-830), Sherbaka (Serbeni) (4580: 710-825), and Kosteshty (Costesti) (4580: 715-820) lie on or near the left bank of the river. The Soviet settlement Avrameni (Avrameni) (4580: 720-810) is directly across the river from Stefanesti. Rumania settlements along the Prut are Cotul Miculinti (4585: 695-855), Crasnalouca (4585: 695-850), Mitoc (4580: 700-845), Liventi (4580: 705-840), and Ripiceni (4580: 710-830) (Figure 29).

In the boundary sector from Kriva to Stefanesti, although the Prut flows in a rather narrow valley, its course is meandering. The land rises more steeply from the river on the right, or Rumanian, side than on the Soviet side. Both sides of the boundary are almost completely cleared of forest cover. There is a small wooded area on the Soviet side east of Lipkany and north of Pereryta, and the river passes through another wood south of Kosteshty.

There are no railroad crossings in this sector. Possible road crossings include: (1) a road from Rădăuți to Lipkany; (2) a road

running northeast from Botoşani (4580: 675-805), crossing at Badrazh Staryy; and (3) a road crossing from Stefaneşti to Avrameni.*

The boundary continues in its southeasterly course from Stefanesti to the Soviet settlement Koyucheny (Coiuceni) (Harlau; 4575: 740-780). In this sector the river valley becomes broader. For a stretch of about 10 kilometers (6.2 miles) in the vicinity of Stefanesti the Prut flows near the left valley rim, and the floodplain (4 to 5 kilometers or 2-1/2 to 3 miles in width) is on the Rumanian side. The river then turns to the west side of the valley and resumes its course near the higher right valley rim until it bends to the east side again at Koyucheny. There appear to be small patches of woodland along the river banks throughout this sector. From the Rumanian settlement Santa-Maria (4575: 725-790) down to Koyucheny, there was formerly a narrow but fairly continuous strip of woodland along the Soviet side of the river. It is probable, however, that this has been partially or completely cleared, in conformity with frontier security regulations.

In the Stefanesti-Koyucheny sector, as in the area to the north, there are many villages along the Prut. Santa-Maria and Bivolari (4575: 735-780) are among the settlements on the Rumanian side. On the Soviet side the rayon center Bolotino (Balotina) (4580: 725-800) and the settlements of Kukhneshty (Cuhnesti) (4575: 725-795) and Kalineshty (Calinesti) (4575: 735-785) lie at the edge of the valley a few kilometers from the river. There are no rail crossings of the boundary in this sector, but a Rumanian road runs roughly parallel to the river, and there is a possible crossing from this road to the Soviet side a short distance south of Santa-Maria.

From Koyucheny to the Soviet settlement of Grozeshty (Grozesti) (Răducăneni; 5070: 785-725), the Prut flows at the eastern edge of its valley. Patches of marsh are found in the low valley on the Rumanian side, and the few wooded areas are small and scattered.

Small settlements near the boundary on the Rumanian side include Hermeziu (4575: 740-775), Tutora (5070: 760-740), Prisacam-Moreni (5070: 770-735), and Grozești (5070: 780-725). On the Soviet side the rayon centers Skulyany (Sculeni-Târg) (4575: 745-760) and Ungeny (Ungheni-Târg) (Fălesti; 5075: 760-750) are located immediately on the river (Figure 30). At Ungeny the boundary is crossed by a

^{*}Road and rail crossings mentioned in the boundary description are those shown on the Russian 1:750,000 map, dated 1950, which served as the primary source for delimiting the boundary. For the road crossings mentioned as possible, it is not known whether the river is crossed by bridge, ford, or ferry.

railroad and a main road from Iaşi (Iaşi; 4570: 745-745); rail lines and roads lead from Ungeny to Bel'tsy and Kishinev on the Soviet side. Between Ungeny and Grozeshty are the Soviet settlements of Valya-Mare (Valea-Mare) (5070: 765-740) and Kostuleny (Costuleni) (5070: 770-735), situated near the river.

In the boundary stretch from Grozeshty to the Rumanian settlement of Falciu (Huşi; 5065: 790-650), physical conditions along the river are similar to those in the area to the north. The number of pond and marsh areas increases, however, as the river flows southward, particularly on the Rumanian side, and the small wooded areas become increasingly rare.

A main road from Husi crosses near the Rumanian settlement of Rasesti (5070: 790-700) to the Soviet settlement of Leusheny (Leuseni) (5070: 795-705). Few other sizable Rumanian settlements are located on the Prut in this sector. On the Soviet side, Tokile-Radukany (Tochile-Raducani) (5065: 800-680) and the rayon center Leovo (Leova) (5065: 800-670), as well as a number of smaller settlements, are located on or near the Prut.

From Falciu to its junction with the Danube, the Prut flows southward, continuing its broadly meandering course. Marshy areas are prevalent, and near the mouth of the Prut the large Lake Brates lies just west of the boundary.

Immediately to the south of Fălciu, near the Rumanian settlement of Bogdănești (Bârlad; 5060: 790-645), a railroad from Bârlad crosses the boundary. On the Soviet side the railroad runs northeast through several minor settlements before swinging southeast; its eventual terminus is Belgorod-Dnestrovskiy. There is also a possible road crossing south of Fălciu.

In the northern part of the boundary sector from Fălciu to the Danube, several Rumanian settlements are located on the right bank of the Prut. These include Bănzeștii (5060: 790-640), Vădeni (5060: 790-620), Rogojeni (5060: 790-615), and Oancea (5060: 790-605). Farther south a number of larger Soviet settlements form an almost continuous line along the left bank of the lower Prut. From north to south these are Manta (Galatz; 5055: 800-595), Vadu-Luy-Isak (Vadu-lui-Isac) (5055: 800-590), Kolibash (Colibasi) (5055: 800-585), Brynza (Brânza) (5055: 800-580), Valeny (Văleni) (5055: 800-575), Slobodsiya Mare (Slobozia-Mare) (5055: 800-570), Kislitsa Prut (Câşliţa-Prut) (5055: 800-565), and Dzhurdzhuleshty (Giurgiulești) (5055: 800-560).

Just south of Dzhurdzhuleshty, at a point about 1 kilometer from the river mouth, the Galati-Reni road and railroad bridge crosses the Prut. This important bridge also carries an oil pipeline.

The boundary follows the Danube from the mouth of the Prut to the point northwest of the city of Tulcea (Tulcea; 5550: 850-525) where the Danube divides into two distributaries. The boundary then follows the northern distributary, the Kilia Arm, through the Danube Delta to the Black Sea.

At the mouth of the Prut the Danube is about 1 kilometer in width. It is assumed that the boundary follows the middle of the main channel (thalweg) of the Danube.

A few kilometers from the mouth of the Prut the Danube passes south of the Soviet town of Reni (5055: 810-555). The river then swings southward, passing to the west of a large lake on the Soviet side, Ozero Cagul (Iacul Cahul). South of this lake the river shifts to a more easterly course, and the boundary follows it southeast to the divergence of the Saint George (Bratul Sfantul Gheorghe) and Kilia (Bratul Chilia) /Kiliyskiy Rukay Arms of the Danube. Two other lakes --Ozero Kartal (Iacul Cartal) (5550: 825-540) and Ozero Kogurluy (Lacul Cuhurlui) (5550: 835-540) -- lie north of the boundary in this sector.

Although some areas along the river may be cultivated, the land is low and in many places marshy. There are few settlements directly on the river below Reni. The Soviet settlement of Orlovka (Cartal) (Brăila; 5050: 820-540) lies about 2 kilometers north of the boundary near the western end of Ozero Kartal, and the Rumanian settlement of Isaccea (5550: 825-535) is situated near the river to the south of that lake. A small island, also called Isaccea, is near the Rumanian shore of the Danube approximately opposite the town of the same name; this island is presumably Rumanian territory, as the main channel of the Danube passes north of it.

From the fork, the Kilia Arm swings northward in a series of broad meanders around the eastern edge of Ozero Kogurluy, then turns southeastward past the Soviet town of Izmail (Ismail) (5550: 850-545). From a point about 10 kilometers below Izmail, the boundary turns northward, then where the Braţul Căslita branches to the left it leaves the Kilia Arm and follows Braţul Tatanir, a channel that runs south of three islands -- Ostrovul Salangic, Dalerul Mare,

and Dalerul Mic. The latter two are shown under the single name of Ostrovul Daler (Bolgrad; 555: 870-550). The boundary rejoins the Kilia Arm at the eastern end of Ostrovul Daler and follows it to the northeast, past the Soviet town of Kiliya (Chilia Noua) (5555: 885-560). The Rumanian settlement, Chilia Veche (5555: 885-555), lies on the south side of the river. East of Kiliya the boundary continues to follow the Kilia Arm north of Babina Island, then south of the island of Salman and past the Soviet town of Vilkovo (Vâlcov) (Periprava Vâlcov; 6055: 910-555).

The Kilia Arm broadens considerably in the vicinity of Vilkovo, and a number of distributaries leading to the sea branch off from it. The boundary follows the Stari Stambul Arm (Bratul Stambul Vechiu) (Sulina; 6050: 915-545), a continuation of the Kilia Arm, southeastward to the Black Sea.

There are no road or railroad crossings of the boundary between the mouth of the Prut and the Black Sea.

C. Boundary Marking, Administration, and Security

In September 1949 the Soviet press announced that the delimitation of the exact frontier between Rumania and the USSR had been completed and that a protocol describing the exact line, along with maps and other documents, had been signed by representatives of the two countries. A Mixed Soviet-Rumanian Frontier Commission had been at work on the delimitation and actual marking of the boundary for some time before the signing of the protocol. On 25 November 1949, a Rumanian-Soviet Frontier Treaty was signed in Moscow, but as in the case of the protocol the terms were not revealed. 62/

The administration of the frontier zones is under the Ministry of the Interior in both Rumania and the USSR. In both countries, standard border-security measures are prescribed by law or decree, but methods of control may vary from area to area, depending on natural conditions and the sensitivity of the frontier sector. Reports from other parts of the European border of the USSR indicate considerable variation in depths of security zones and methods of border control. The features of boundary administration described here are those that apply to frontiers in general. It is doubtful whether all the features of the prescribed frontier-security system are uniformly operative along the river boundary between Rumania and the USSR.

Along all Rumanian frontiers, a zone 10 meters (32.8 feet) wide is required to be cleared of trees and any form of cultivation. This zone is kept plowed and raked by the frontier guards. A zone

extending 100 meters (328 feet) back from the frontier line must be kept clear of trees and brush; and cultivation of orchards, vineyards, or tall plants is prohibited to a depth of 500 meters (1,640 feet). Organized hunting is also prohibited in the 500-meter zone, and individual shooting is prohibited in a 2,000-meter (1-1/4 mile) zone, except along the Danube and the Black Sea, where shooting is allowed as far as the banks.

Fixed observation posts are maintained along the boundary at intervals of 200 to 500 meters, and border guards patrol the frontier in pairs. The Rumanian border guards are the <u>Graniceri</u>. The smallest organizational unit is the platoon of 50 to 80 men, which is divided into functional units -- pickets (about 20 men) and fixed posts (3 to 5 men). The platoons are armed with automatic pistols, rifles, machine guns, and hand grenades. The uniforms of the <u>Graniceri</u> are olive green like those of the Rumanian Army, from which they are distinguished by dark- and light-green caps, shoulderboards, and collar tabs and their insignia, a small metal grenade with the letters GR, on the shoulderboards.

The Soviet Union maintains an even more elaborate system of border zones, which appears to conform to the pattern observed elsewhere. Four zones are prescribed. A 4-meter (13-foot) zone immediately adjacent to the frontier is completely cleared. A second zone, extending 500 meters from the line, is strictly supervised by frontier troops, and various barriers are installed in it. In most sectors, this zone is marked by concrete blocks painted black and white and the civilian population has been evacuated from it. In the third zone, which extends 7.5 kilometers (4.6 miles) back from the frontier, the guards may establish concealed observation posts. The fourth zone extends into the interior to a depth of 22 kilometers (13.6 miles) from the line; in it the population is under the close surveillance of the MVD (Ministry of Internal Affairs), and frequent security checks are made. Persons living in or traveling through frontier zones must have passports stamped by the MVD. 63/

Soviet fortifications on the Rumanian-Moldavian frontier are probably typical of those believed to extend all along the Rumanian-USSR boundary. They consist of bunkers spaced at 200- to 300-meter intervals, each containing a gun of approximately 15 centimeters manned by a crew of six men. Watchtowers equipped with searchlights and machine guns are located between the bunkers. Troops armed with machine carbines and accompanied by watchdogs patrol the area. Barbedwire barriers and automatic warning devices such as flares, apparently typical features of other Soviet borders, have not been mentioned in reports on the Moldavian frontier, but they may be present.

In the Chernovtsy area it appears that there are the usual watchtowers on the Soviet side, along with a strip of raked sand between two wooden fences. The watchtowers, which are of wood, are located about 15 meters from the frontier line, spaced at 500-meter intervals, and equipped with searchlights and machine guns. A fence, presumably of barbed wire, is thought to be electrically charged. Along the western part of the Rumanian-Soviet border area, in the vicinity of the Sighet-Kolomyya railroad crossing over the Tisa River, similar security measures are known to exist.

Soviet border troops of the MVD carry on extensive espionage activities on both sides of the border. Their uniforms resemble those of the Red Army but are distinguished by the color green on the cap, shoulderboards, and collar tabs. Kishinev is known to be the headquarters for Soviet border troops in the Moldavian Border District.

The MVD border troops are organized into otryad, komendatura, and zastava units. The otryad, or detachment, is the highest organizational unit. The number of otryady stationed along the Moldavian border is not known, but there are usually three to five in a border district. The border otryad carries on operational work along a large boundary sector and also trains recruits and directs intelligence in the frontier area. The subordinate komendatury are more directly concerned with guarding the boundary through the supervision of a number of outposts (zastavy).

The <u>zastava</u> is the basic unit for border control. It may be composed of 50 to 100 men, plus a number of horses and watchdogs. The number of men and the spacing of the outposts depend on the length, importance, and terrain conditions of the border sector. The <u>zastava</u> operates the watchtowers, patrols, and hidden observation posts along the frontier. Each <u>zastava</u> has telephone connections with its <u>komendatura</u> and with neighboring <u>zastavy</u>.

D. Maps of the Boundary

The postwar delimitation of the exact boundary between Rumania and the USSR was completed by a Mixed Soviet-Rumanian Frontier Commission in September 1949. The western part of this border is the former frontier between Rumania and Czechoslovakia, and a good available source for this line is a British series at 1:75,000, printed in 1941 (1, in list below). The main available source for the eastern frontier of Rumania in the Bucovina area is three sheets published by the Rumanian Geographic Military Institute (2).

The source used for the boundary along the Prut and Danube Rivers was a Russian map at the scale of 1:750,000 published in 1950 (3). Large-scale maps covering these sectors of the boundary are not available. The only available official map is Karta Rumynii at 1:1,500,000 (4). The small scale of this map, plus lack of clarity in the printing, makes it impossible to follow the course of the boundary in the Danube Delta area; the boundary is shown along the northern (or Kilia) arm, but its course in relation to minor channels and islets is not clear.

A 1944 German reprint of a Rumanian series (5) was used for tracing the boundary as determined from the above sources.

- 1. Czechoslovakia 1:75,000; /British/ War Office, Geographical Section, General Staff, GSGS 4060; Sheets 4770, 4771, 4772, 4773, 4870, 4871, and 4872, 1941.
- 2. /Rumania/; 1:100,000; /Rumanian/ Institutul Geografic Militar (Geographic Military Institute); Sheets 3580, and 4085, 1941.
- 3. Politiko-Administrativnaya Karta Ukrainskoy SSR i Moldavskoy SSR (Political-Administrative Map of the Ukrainian and Moldavian SSR's); 1:750,000; Glavnoye Upravleniye Geodezii i Kartografii; Moscow, 1950.
- 4. Karta Rumynii (Map of Rumania); 1,500,000; Peace Treaty with Rumania, Annex 1, 1947.
 - 5. Rumanien 1:100,000; German General Staff; 1944.



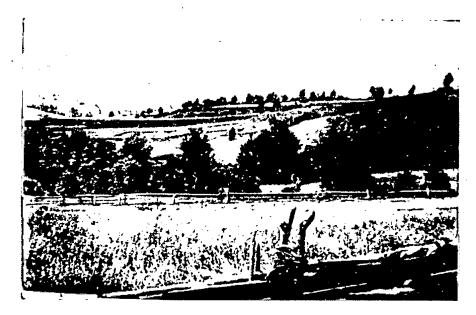


Figure 25. The Užok (Uzhok) Pass along the Polish-Soviet frontier ($48^{\circ}59'N-22^{\circ}51'E$).



Figure 26. Abandoned barbed-wire entanglements in the Carpatho-Ukraine area. (Exact location unknown.)



Figure 27. Frontier between Hungary and the USSR, seen from the Hungarian side. (Location unknown.)



Figure 28. The settlement of Tyachev on the Soviet-Rumanian frontier, located on the Tisza River at $48^{\circ}02'N-23^{\circ}35'E$.

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Figure 29. Bluffs along the Prut River. in the vicinity of Ripiceni.

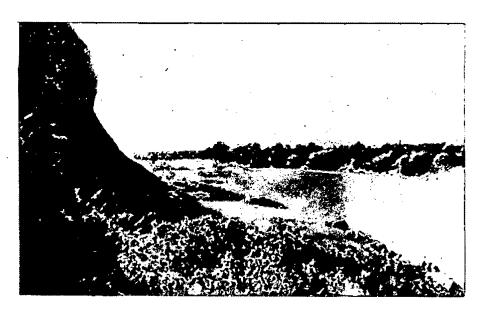
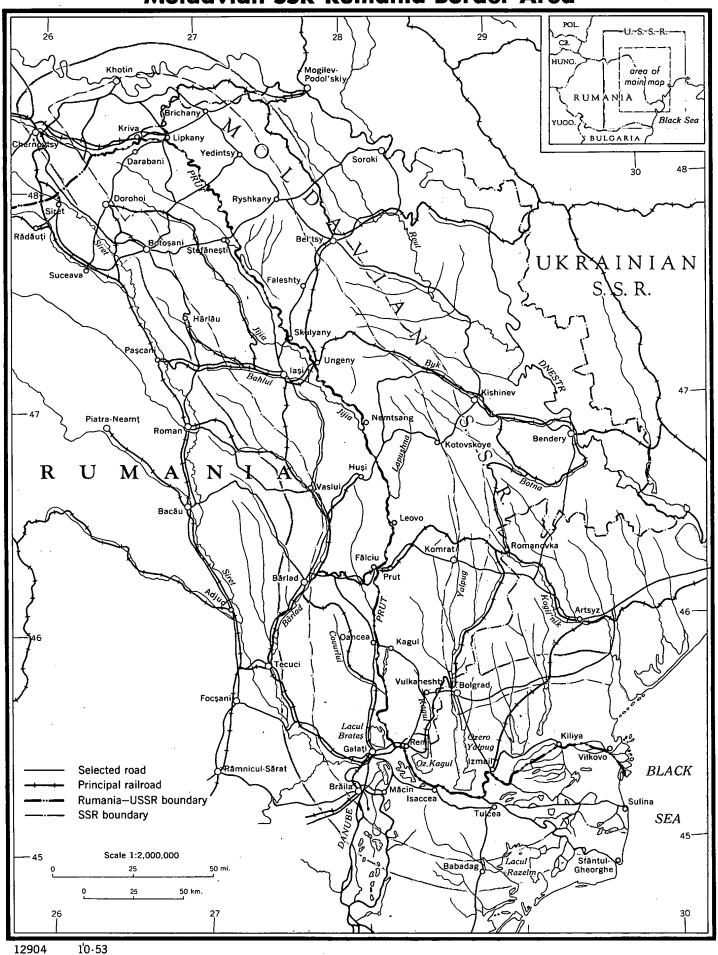
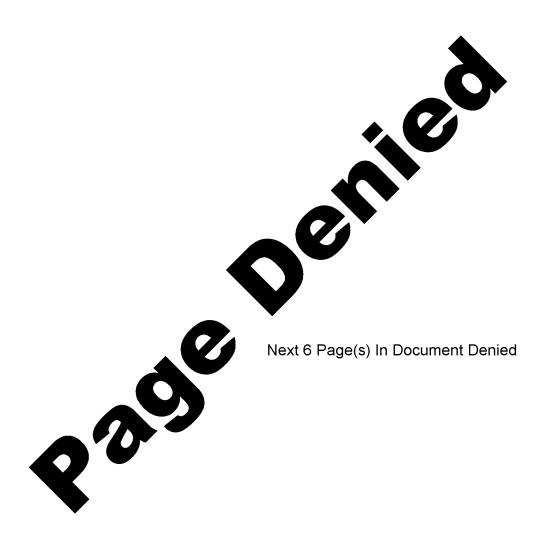


Figure 30. The Prut River near Ungeny at flood stage. Note the single-track railroad bridge in background.

Moldavian SSR-Rumania Border Area





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